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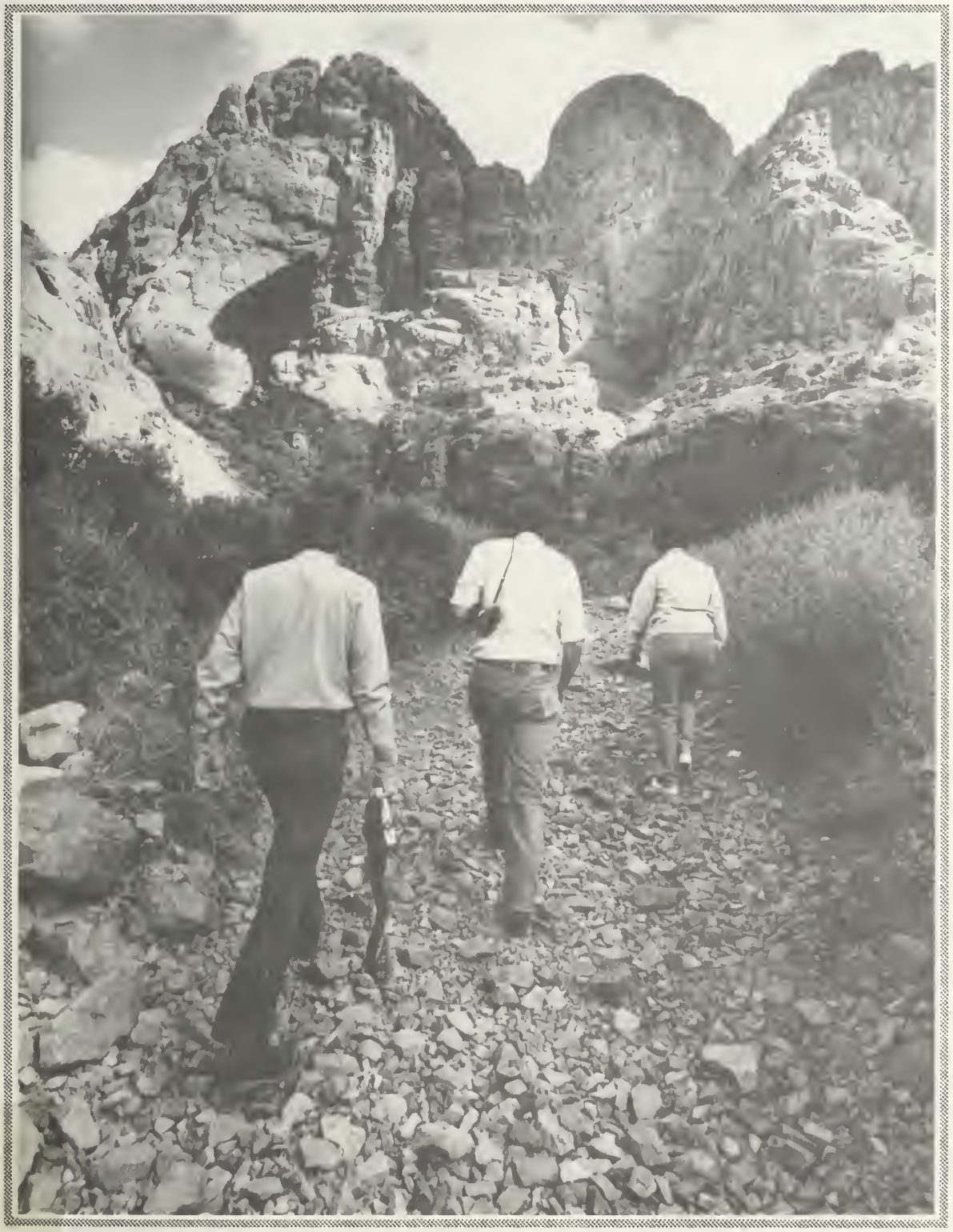
Managing the Nation's Public Lands



Fiscal Year 1989

The Department of Interior
Bureau of Land Management

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Managing the Nation's Public Lands

Fiscal Year 1989

This report to the Congress of the United States on the management of the Nation's public lands is submitted pursuant to requirements of the Federal Land Policy and Management Act of 1976 and covers the period from October 1, 1988 through September 30, 1989.

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BLM Mission Statement

The Bureau of Land Management is responsible for the balanced management of the public lands and resources and their various values so that they are considered in a combination that will best serve the needs of the American people. Management is based upon the principles of multiple use and sustained yield—a combination of uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources. These resources include recreation, range, timber, minerals, watershed, fish and wildlife, wilderness, and natural scenic, scientific and cultural values.

Department of the Interior Mission Statement

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural and cultural resources. This includes fostering wise use of our land and water resources, protection of our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department also promotes the goals of the Take Pride in America campaign by encouraging stewardship and citizen responsibility for the public lands and promoting citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. Administration.

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Introduction

HISTORICAL PERSPECTIVE

In the last half of the 18th century and the first half of the 19th century, the United States government acquired most of the land west of the Appalachian Mountains, eventually owning more than 1.5 billion acres of public domain — land that had never been in private ownership. Although the federal government has since titled most of this acreage to private citizens, industry, and state and local governments, some of the public domain land was dedicated to establish the national parks, national forests, national wildlife refuges, military compounds, and other government facilities. However, approximately 270 million acres — about one-eighth of the Nation — remain today as public land, which is managed by the Bureau of Land Management (BLM) for multiple uses. In addition, BLM manages the mineral estate underlying another 300 million acres of land administered or owned by other agencies or private interests. Most of this acreage is located in the western states, including Alaska, although small parcels are scattered across the eastern states.

In 1812, Congress established the General Land Office to administer the public domain, with the primary purpose of passing public domain lands into private ownership. The passage of the Taylor Grazing Act in 1934 and establishment of the U.S. Grazing Service provided for active range management on the public domain, but this was seen as interim management of the land pending its final disposal into nonfederal ownership.

In 1946, the Presidential Reorganization Plan No. 2 merged the Grazing Service with the General Land Office to create the Bureau of Land Management within the Department of the Interior. The Bureau became responsible for managing all the resources on the Nation's public domain land; however, with more than 2,000 unrelated and often conflicting laws pertaining to the public domain, the agency had no unified legislative authority to manage those lands.

THE FEDERAL LAND POLICY AND MANAGEMENT ACT

When Congress enacted the Federal Land Policy and Management Act of 1976 (FLPMA), it established a coherent legislative mandate for managing the public land and made BLM a true multiple-use agency. The law recognized that public land is a national asset, providing goods, services, and vast natural resources for millions of Americans:

"...Congress declares that it is the policy of the United States that...
"the public lands be managed in a manner which recognizes the Nation's need for domestic sources of minerals, food, timber, and fiber from the public lands...

"the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use..."

(FLPMA, Section 102[a][12] and 102[a][8]

AMERICA'S RESOURCES

FLPMA provides a clear-cut policy that most public land is to be retained in federal ownership and managed by BLM under a concept of multiple use for all Americans, with the full participation of the public and a careful balancing of the interests of competing users. Today BLM manages a multitude of assets for the American public. They include:

- *about 1.4 billion barrels of proven oil reserves;*
- *approximately 12.5 trillion cubic feet of proven natural gas reserves;*
- *10 million animal-unit months of forage to support about 4.3 million head of domestic livestock;*
- *the major portion of the undiscovered but geologically predictable domestic deposits of aluminium, antimony, beryllium, bismuth, cadmium, chromium, cobalt, copper, fluospar, lead, manganese, mercury, molybdenum, nickle, platinum group metals, silver tungsten, and vanadium;*
- *almost 8 million acres of commercial forest land with a producing capacity of about 1.4 billion board feet each year;*
- *about 80 percent of the Nation's oil shale;*
- *more than 350 designated areas of critical environmental concern;*
- *all 11 of the Nation's major tar sand sites;*
- *thousands of unique recreational areas, including 32 Wild and Scenic Rivers, 22 National Trails, 472 developed and semi-developed recreation sites including 471 day-use units and 6,749 family camping units, 65,000 miles of roads suitable for recreation travel, 4.2 million acres of lakes and reservoirs, and thousands of areas open to a wide variety of recreational uses;*

- *about one-third of the Nation's coal supply;*
- *more than 465,000 acres of designated wilderness in 25 areas and more than 25 million acres under study for possible designation;*
- *some 35 percent of the Nation's uranium reserves;*
- *186 archaeological and historical listings in the National Register of Historic Places comprising more than 3,000 historical and archaeological properties that have nationally significant values;*
- *world class deposits of phosphate, sodium, lead, zinc, and potash;*
- *habitat for one out of every five big game animals in the United States, including many caribou, brown and grizzly bears, desert bighorn sheep, moose, mule deer, and antelope;*
- *nearly 85,000 miles of streams containing trout, salmon, and other sport fish — enough to encircle the earth three and one-half times;*
- *prospective sources of geothermal energy and more than 55 million acres, plus 2 million acres of known geothermal resource areas; and*
- *approximately 96 percent of all wild horses and burros managed, protected, and controlled under the Wild Free-Roaming Horse and Burro Act of 1971.*

MULTIPLE-USE MANAGEMENT

The BLM manages all the Nation's public land to meet the needs and desires of the American public. The magnitude and value of these resources frequently lead to conflicting demands and uses for the public land. The FLPMA mandate for multiple-use management is BLM's most powerful tool for reconciling the differences of opinion about how public land is to be managed. Multiple-use provides for the development of needed resources, while protecting other resource values from inadvertent damage or destruction. Through a planning, decision making, and management processes that balances alternative uses and involves the public at all steps, BLM can provide opportunities for many different uses of the public land and ensure that its many resources will remain available to the public in the future.

American citizens can play a critical part in public land management — today and into the future. How Americans deal with the public land today and tomorrow will determine what this land will offer on BLM's 50th, 80th and 100th birthdays. The Bureau encourages all citizens to learn more about public land, to become involved in its management, and to enjoy the opportunities afforded in its multiple use management.

ORGANIZATIONAL STRUCTURE

The BLM's national office is in Washington, D.C. In addition, there are 12 state offices, 58 district offices, and 140 resource area offices. The BLM has about 9,650 employees, most of whom work in field offices in the West. Multiple-use management requires many skills and talents. Foresters, range conservationists, wildlife biologists, archaeologists, and many other disciplines are needed to care for and manage the public land.

The following pages provide an overview of public land management during Fiscal Year (FY)1989. Additional information about BLM and the public land is available from BLM headquarters or state or local offices.

Renewable Resources Programs

FISH AND WILDLIFE HABITAT

Fish and wildlife habitat on BLM-administered land provides homes for more than 3,000 species of mammals, birds, reptiles, fish, and amphibians. No single federal or state agency manages more fish and wildlife habitat than the BLM. Cooperation between state and other federal agencies that have primary responsibility for wildlife and fisheries population management is essential to the success of the BLM's program.

Fish and Wildlife 2000

Fiscal Year 1989 marked the second year of implementation of *Fish and Wildlife 2000,* the BLM's strategic plan for fish and wildlife resource management on the public land. This plan is bringing a clearer focus to the direction and management of the BLM's wildlife and fisheries program. Drafts of state-level *Fish and Wildlife 2000* plans were prepared and when completed will provide a blueprint for BLM's state-level programs.

Partnerships

Continued emphasis on the development of partnerships with various organizations has resulted in increased investments from sports groups and other private interests. This also has enabled BLM to better capitalize on the Challenge Cost Share funds made available from Congress. In FY 89, the $1.5 million Challenge Cost Share appropriation was matched by almost $2 million in outside funds, labor and materials. These funds were used for on-the-ground habitat projects, studies and inventory. Nearly 40 organizations participated as partners with BLM on 60 different projects. The BLM was unable to fund an additional 148 projects involving 100 organizations with contributions of an additional $2.4 million.

Other partnerships in FY 89 included a national Memorandum of Understanding with the Mule Deer Foundation. Similar agreements are also being developed with other organizations.

Threatened or Endangered Species

Desert Tortoise Habitat Management — Emphasis was placed on implementing a rangewide management plan for desert tortoise habitat in the four-state area of California, Nevada, Utah and Arizona. In addition, a management oversight group (MOG) called for in the rangewide plan became operational. The MOG will better ensure interagency coordination of research, studies and on-the-ground management.

Threatened or Endangered Fisheries Habitat Management — Currently about 100 species of fish federally listed as threatened or endangered or as candidate species can be found on BLM land. An interdiciplinary team was established to formulate strategies for managing these species with a strategic plan to be completed in FY 90.

Special Status Plants — About 45 threatened or endangered plants and 650 candidate plant species are found on BLM land. Management of these species poses significant challenges. In FY 89, an interdisciplinary team was established to formulate strategies for implementing the *Fish and Wildlife 2000* objectives as they relate to plants.

Wildlife

Waterfowl Habitat — BLM land contains 20 million acres of wetlands and waterfowl habitat. In FY 89, implementation of the waterfowl strategy plan was initiated. This strategy will be integrated with the North American Waterfowl Plan and the Department of Interior's Wetland Initiative.

Desert Bighorn Sheep Rangewide Plan — The BLM manages the habitat for 80 percent of the desert bighorn sheep in this country. The management plan for desert bighorn sheep, approved in FY 88 and encompassing six western states, was implemented. Two new herds were established in FY 89. Of the 115 target habitats identified in the plan, 92 now have sheep populations.

Watchable Wildlife — Watchable Wildlife is a joint wildlife and recreation initiative in cooperation with other federal and state agencies and conservation organizations. The major thrust of this initiative is the establishment of wildlife viewing areas. The BLM is developing a Memorandum of Understanding with federal and state agencies and conservation organizations to better ensure a partnership effort on watchable wildlife areas, production of state viewing guides, and other implementation actions. Work was begun in FY 89 with the Defenders of Wildlife on a watchable wildlife brochure.

Animal Inn — The BLM, together with the Forest Service, continues to implement a national program to create an awareness of the value of "life in dead trees." The program involves safeguarding "Animal Inns," and establishing an awareness that certain snags and dead trees provide homes for nongame and other wildlife.

Upland Game Bird Habitat — A strategy team was organized in FY 89 and includes representatives from two state wildlife agencies and several upland bird organizations. The team is identifying strategies for managing eight species of quail, several species of grouse, ring-neck pheasant, and the wild turkey. Some of these species, such as the Columbian sharptail grouse, are declining. With improved management, BLM's goal is to reverse these declines to prevent the need for listing any of these species as threatened or endangered. The upland game bird plan is due for completion by the end of FY 90.

Raptors — The Raptor Habitat Strategy Plan was approved and publication was done in cooperation with the Raptor Research Foundation. The plan describes 223 key raptor areas on BLM-adminis-

tered land representing 23.5 million acres of habitat. A series of management actions are identified which will ensure achievement of the raptor goal and objectives in *Fish and Wildlife 2000.*

Pilot Sikes Act Stamp Program – The second pilot Sikes Act stamp program was initiated in Montana. The first was successfully implemented in New Mexico.

In Montana, the BLM is implementing the pilot Sikes Act stamp program jointly with the state fish and wildlife agency and the Forest Service, as was done in New Mexico. Revenues from the sale of public land management stamps will be used for habitat improvements on the lands covered by the pilot program.

Fisheries

Anadromous Fish Habitat Management — The BLM administers more than 13,000 miles of habitat in the Pacific Northwest and Alaska for salmon and steelhead. In recognition of the $40 million commercial value of these species and the additional 1.5 million recreational fishing days, continued emphasis was placed on implementing the anadromous fish strategy plan.

Fisheries Program Assessment and Strategy Plan — In FY 89 an assessment of the current fisheries program and a series of strategies for achieving the fisheries objectives in *Fish and Wildlife 2000* were approved. This plan applies to the 155,000 miles of fishable streams and 4 million acres of reservoirs managed by BLM. Implementation efforts were initiated within budget constraints.

FORESTRY

Approximately 48 million acres of BLM-administered land is forested. Twenty-two million of those acres are located in Alaska and 26 million acres in the lower 48 states. Forest land is classified as commercial— capable of producing 20 cubic feet of wood volume per acre per year regardless of species— or as woodland. All of this forest land provides many benefits including wildlife habitat, watershed protection, recreation, forest products, and livestock forage. The forest products include sawlogs, fuelwood, Christmas trees and pinenuts.

The 22 million acres of forest land in Alaska consists of approximately seven million acres of commercial forest and 15 million acres of woodlands. Only minimal harvest activity is occurring on this land due to recent land status changes. The 26 million acres of forest land in the lower 48 states consist of five million acres of commercial forest land and 21 million acres of woodland. Approximately half of the timberland is located in western Oregon and is considered to be some of the most productive forest land in the world.

In western Oregon, .746 billion board feet of timber were offered and sold during FY 89 and 1.349 billion board feet of timber were harvested. Receipts from the harvest approximated $250 million. Harvest levels exceed the historical average due to continuing increased demand and excellent market conditions. The full allowable sale quantity of 1.176 billion board feet was not offered and sold due to court injunctions which halted the sale of old-growth timber within 2.1 miles of certain northern spotted owl habitat sites.

In June, the U.S. Fish and Wildlife Service (FWS) proposed listing the northern spotted owl as threatened under the Endangered Species Act (ESA). While the FWS is reviewing the scientific information on the owl, BLM is conferencing, as required by the ESA, on all timber sales and activities that might impact the species. In the meantime, BLM is protecting 122 owl sites in accordance with a 1987 agreement with the Oregon Department of Fish and Wildlife. The BLM is also a participant with the Forest Service, FWS, and National Park Service in a scientific committee. This committee is reviewing all sources of owl information and attempting to develop a long-term conservation plan that protects the spotted owl and allows a reasonable level of timber harvest.

On public land outside western Oregon, BLM produced overall resource benefits that exceeded investments. In achieving this, 63.9 million board feet of timber were offered and sold. Forty-five thousand other forest product permits were sold commercially and for individual use.

Tree planting continued throughout the West with 34,750 acres planted in western Oregon and 2,575 acres planted elsewhere in the West. In addition to the planting, forest development activity included 25,720 acres of maintenance and 1,075 acres of timber stand improvement.

The Federal Timber Payment Modification Act passed in 1984 requires the Secretary of the Interior to report any actions that discourage bidding in which a purchaser is unable to perform contracts or any bidding that leads to speculation. In the process of monitoring bidding practices, BLM has discovered no evidence of speculative bidding. Rules implemented in 1982, requiring up-front cash deposits and scheduled payments and establishing procedures to offer more short-term contracts, have been effective. However, BLM will continue to monitor bidding practices. In addition, a policy was published in July which provides for deferral of a portion of the payments, to be paid under the terms of a promissory note, on contracts not returned under the 1984 Act. This policy was designed to encourage performance of the high-priced contracts rather than default.

RANGELAND RESOURCES

During FY 89, the BLM continued to monitor grazing allotments to determine impacts of present management practices. The BLM also emphasized the

importance of selective management, range improvement, and riparian policies in developing coordinated management prescriptions for the proper management of upland and riparian ranges. Monitoring plans have been prepared in all states with support from a wide array of interest groups.

Range Management

Since the passage of FLPMA, the focus of the range management program has been expanded to reflect consideration of all uses of public rangelands. The principal emphasis of the range management program is on the proper, integrated management of riparian and upland ranges to protect and improve rangeland resources for all of the multiple uses, including management of livestock grazing. Sound land use planning, done in coordination, consultation, and cooperation with range users, interest groups, and other interested parties at the national and local levels, provides the basis for development of resource management objectives.

Following completion of land use planning and preparation of environmental impact statements (EISs), the resulting decisions are implemented through preparation of allotment management plans or coordinated activity plans which identify grazing management prescriptions and other on-the-ground activities needed to achieve site-specific vegetation and other resource management objectives. The BLM prepared 197 grazing activity plans during FY 89.

A major effort of the range management program has been the completion of EISs which address the impacts of livestock grazing on more than 164 million acres of public lands in ten western states. All grazing EISs are now complete, with the last being completed in FY 89. The emphasis of the program has shifted from preparation of grazing EISs to the proper, integrated management of rangelands. This is being achieved, in part, by documenting the benefits that can be realized and by informing and motivating others through the identification of successes. The growing support of

the livestock industry for riparian area improvement is one example of how an awareness of benefits motivates affected interests.

In FY 89, about 2.4 million acres were inventoried using the ecological site inventory method. The information provides a basis for land use planning,

for identifying and supporting needed management actions, and for detecting changes in resource condition through monitoring studies. Rangeland monitoring continues to be among BLM's top priorities. At the end of FY 89, there were 10,431 allotments with established monitoring systems. A workshop was held in Nevada in December 1988. The purpose of the workshop was for field office monitoring coordinators to further explain and refine monitoring policy and procedure and to ensure that effective monitoring activity would involve all rangeland resources and continue in future years.

Range improvements continue to be an important part of the range management program. During FY 89, range improvements included development of 533 water facilities, construction of 299 miles of fencing, development of 74 management facilities, treatment of 66,743 acres of vegetation, and maintenance of 280 improvement projects. The BLM and Forest Service continue to actively support the Experimental Stewardship Program (ESP), as authorized by the Public Rangelands Improvement Act of 1978. The purpose of the ESP is to foster innovation, cooperation, and better range stewardship, ultimately leading to the improved condition of public lands. During FY 89, the Seventh National Resource Stewardship Conference was held in Utah. The ESP continues to improve communication and cooperation between private range users and BLM and Forest Service personnel and to increase pride in, and commitment to, the stewardship of public lands.

The BLM continues to implement and emphasize the 1987 Memorandum of Understanding (MOU) with United States Department of Agriculture agencies for coordinated resource management. The MOU facilitates coordination of resource planning, management, and educational activities with state and local agencies, private landowners, and other interested public entities for development of sound resource management and conservation practices and procedures developed through the ESP.

The grazing fee formula consists of a base value of grazing on public land adjusted by indices reflecting current year land lease rates, cost of production, and beef cattle prices. Annual increases or decreases of fees will be limited to no more than a 25 percent change from the previous year's fee. The fee will not, however, be lower than $1.35 per animal unit month (AUM). An AUM is the amount of forage consumed by one cow and one calf, one horse, or five sheep or goats in one month.

About 18,900 livestock operators used land administered by BLM to supply part of the forage needed by 2,137,400 cattle, 2,244,000 sheep/goats, and 10,900 horses in FY 89. Approximately 10,400,000 AUMs at $1.86/AUM were licensed in FY 89.

SOIL, WATER AND AIR

The consideration of soil, water, and air is basic to meeting many of the multiple-use objectives of the BLM. Through the assessment and inventory of soil, water, and air resources information is provided for multiple-use planning and management. The soil, water, and air program also achieves objectives specific to water and air quality, watershed improvement, and riparian-wetland area enhancement.

During FY 89, over 4 million acres of soil survey were completed. This brings the total number of acres inventoried to approximately 144 million. Work was initiated to determine the feasibility of reaching the goal of completing soil surveys on 157 million acres by 1995.

The BLM is participating in basin-wide water rights adjudications on the Gila, Snake, and Rio Chama Rivers. Also, progress is being made toward meeting the overall goal of quantifying all existing water uses to facilitate water right claims on public land. During FY 89, nearly 6,000 water sources were added to data bases used for recording water right filings with the states. Some of the water right filings were made in response to state river basin adjudications while others were made to the states on BLM's initiative. Effort is continuing in assessing instream flow requirements. Acquiring water rights is vital to the successful management of the public land.

During FY 89, 332 watershed improvements were completed. These improvements reduced erosion and sediment yields, improved water quality, stabilized streambanks and channels, reduced salinity, recharged ground water, and increased water quantity. Maintenance of existing improvements continues as an ongoing effort, with 243 projects being completed in FY 89. Over 3,000 watershed stations were monitored to assess progress toward meeting soil and water management objectives.

Progress continues to be made in implementing the actions outlined in the report to Congress entitled "Salinity Control on BLM-Administered Public Lands in the Colorado River Basin." The report outlines a comprehensive program for minimizing the contributions of salt from public land to the Colorado River. Watershed management plans were developed in seven watersheds to implement management prescriptions and practices to control salinity problems. In FY 89, an estimated 400 tons of salt were prevented from reaching the Colorado River through salinity control project construction and maintenance activities. In addition to the seven watershed management plans prepared in the salinity areas, 22 were prepared in other watershed areas to address nonpoint source problems, riparian-wetland area needs, and watershed problems of general concern. Substantial work was also completed with the States in coordination and preparation of water quality management plans prepared pursuant to Section 319 of the Water Quality Act.

A wilderness baseline monitoring project was initiated in FY 87 to test and demonstrate monitoring techniques and to develop monitoring plans for management of BLM wilderness areas and wilderness study areas. In FY 89, the effort was extended to include an additional wilderness area with greater biological diversity. The Wildland Resource Infor-

mation Data System was developed in FY 89 to provide an automated system for storage and retrieval of natural resource monitoring data from wilderness areas.

The air resource program supports the operation of more than 28 Remote Area Weather Stations and other climate stations to provide site-specific climate information for use in a wide variety of management activities. The BLM's air modeling supports a wide variety of Bureau activities including energy and mineral leasing, smoke management for prescribed burning, wilderness management, and resource management planning. Air modeling is used to help assure compliance with Environmental Protection Agency and state air quality standards and regulations.

The BLM's air resource program continues to play a key monitoring role in the National Acid Precipitation Assessment by operating 15 acid rain monitoring stations at remote locations in nine Western States. In FY 89, BLM continued operation of two dry deposition (aerosols, gases) monitoring sites co-located with acid rain stations in Idaho and Wyoming. These stations are part of the Environmental Protection Agency's National Dry Deposition Network which established 10 stations in the West in Fiscal Year 1988. These stations provide data essential for the development of acid precipitation maps used to determine trends and possible impacts of acidic deposition in the western United States.

PEST CONTROL

Weeds

The BLM participates in cooperative programs with states and counties for the control of noxious weeds on public lands. Strategies for prevention of weeds are being integrated with control measures. Approximately, 60,000 acres were treated for noxious weeds in FY 1989, with more than 30,000 acres being managed by alternative means such as introduction of predaceous insects. The BLM is participating with other agencies in integrated pest management (weed) research.

Grasshoppers

The BLM periodically, in cooperation with the Animal and Plant Health Inspection Service (APHIS), initiates action needed to control grasshoppers and other insects on public land. When the infestations reach epidemic levels, APHIS applies control treatments. The BLM, in cooperation with APHIS, is sponsoring research to develop alternative pest management techniques for prevention of epidemic infestations.

RIPARIAN AREAS

During FY 89, the BLM continued to develop guidelines for classification of riparian areas and completed a guide to grazing management in riparian areas. Each state completed a strategic plan to guide statewide implementation of ripar-

ian area management. The BLM continued to rehabilitate degraded riparian areas and cooperate in this effort with private, state, and other federal entities.

The BLM incorporated the Riparian Area Management Policy into a riparian-wetland area management manual and continued to implement the riparian-wetland initiative. The BLM's initiative stresses a holistic watershed management approach with participation from all resource programs including range, forestry, wildlife, minerals, watershed, etc. The initiative emphasizes management of the natural recovery process prior to considering structural measures.

As part of implementation of the General Accounting Offices report titled "Public Rangelands, Some Riparian Areas Restored But Widespread Improvement Will Be Slow," BLM completed a 5-year needs assessment for the riparian-wetland initiative. Based on the BLM's policy definition of riparian-wetland areas, there are about 22.9 million acres of riparian areas associated with lakes, ponds, reservoirs, and marshes and 174,000 miles associated with streams. Of this total, 133,000 miles and 22 million acres are in Alaska. Riparian-wetland areas comprise less than one percent of the public land in the western United States, but they have ecological and economic importance far beyond their relative small acreage.

During FY 89, a number of training sessions and workshops were held to increase the "riparian consciousness" among BLM resource specialist and managers as well as to improve their skills in restoring and protecting riparian-wetland areas. Public information brochures, videos, slide shows, etc. were produced and presented to the general public and the public land users to increase their understanding of the values of restoring and enhancing riparian-wetland areas.

Demonstration areas continued to be used to show the multiple benefits of improving riparian areas. Benefits and values include increased ground water recharge, restored perennial stream flows, increased forage and cover for wildlife and livestock, reduced flood and sediment damage and improved water quality. A report on the economic implication of these benefits was prepared during FY 89.

The San Pedro in Arizona was established as the nation's first Riparian National Conservation Area (RNCA). The land was acquired through a series of land exchanges because of the area's outstanding natural, cultural and paleontological values. The 56,431 acre San Pedro RNCA includes more than 35 miles of the San Pedro River, representing one of the best remaining examples of a desert riparian ecosystem.

Prehistoric man also was attracted to the San Pedro. More than 250 prehistoric and historic sites and nine fossil sites have been identified. Clovis projectile points dating back 11,000 years have been found with extinct mammoth, horses, bison and tapir bones. Historically, the area includes a Spanish presidio called Santa Cruz de Terrenate that was established in 1776, the Mormon Battalion route, Wells Fargo stage stations and the long-abandoned mining towns of Fairbank, Charleston and Contention, which were associated with the Tombstone silver boom.

The BLM continues to work in partnership with the Isaac Walton League of America on extensive riparian enhancement projects initiated in FY 87. In addition, several significant riparian projects involving the livestock industry are underway including the Thorn Creek Project in Idaho.

WILD HORSE AND BURRO PROGRAM

The Bureau of Land Management protects, manages, and controls an estimated 46,500 wild horses and burros that roam 35 million acres of public land. One of BLM's responsibilities under the Wild Free-Roaming Horse and Burro Act (Public Law 92-195, as amended) is to remove excess wild horses and burros from the range to maintain a thriving natural ecological balance. In FY 89, the Bureau gathered nearly 4,500 excess animals, less than half the number planned for the year. The shortfall resulted from delays brought about by an appeal of several removal plans scheduled for Nevada. The ruling on these appeals by the Interior Board of Land Appeals (IBLA) set a stringent standard for determining that there are excess wild horses and burros on a particular area before removals can be accomplished. As the fiscal year ended, BLM was developing new guidance to reflect the IBLA decision.

The postponed removals also limited the supply of animals for the adoption program. The BLM placed 5,220 animals in private care in FY 89, about 60 percent of the adoption target. Most adoptions took place at 70 temporary centers held on weekends in various locations. For the first time since 1984, there were no fee waiver adoptions. Fee waivers were discontinued at the end of FY 88.

Many of the four-to-six year-old horses were sent to prisons in California, Colorado, New Mexico, or Wyoming, where inmates halter trained the animals before they were offered for adoption.

Older horses and younger ones with undesirable characteristics were sent to the wild horse sanctuary in South Dakota where unadoptable wild horses will live out their lives on pastureland. Fiscal Year 89 was the first full year of operation for the sanctuary. By the end of the fiscal year, the two units that comprise the South Dakota sanctuary were home to 1,750 wild horses.

At the direction of Congress, BLM developed sanctuary guidelines in January 1989, to apply to any wild horse sanctuary established by BLM in cooperation with the private sector. In 1989, BLM used these guidelines in the competitive process that awarded a cooperative assistance agreement for a second sanctuary near Bartlesville, Oklahoma. Together, the South Dakota and Oklahoma sanctuaries have room for approximately 4,000 unadoptable wild horses.

The sanctuaries are to be federally funded for three years, after which they are expected to be financially self-sufficient.

An unresolved problem in 1989 was the killing of wild free-roaming horses in Nevada. In 1988 and 1989, the remains of more than 600 wild horses were discovered in remote areas of the State. It appeared that many of the animals had been shot. When wild horses or burros on the public land are captured, harassed, or destroyed, BLM acts to identify those responsible and bring them to justice. In the Nevada killings, BLM pledged $5,000 of a total reward of $18,000. The BLM's investigation led to the indictment of several individuals. One person was tried and acquitted in the summer of 1989; charges against five others were dismissed. At the end of FY 89, a separate indictment was still pending, and the investigation was continuing.

LANDS PROGRAMS

LANDS

During FY 89, the BLM's lands program focused on:

- state, large landowner, and high public interest land exchanges;
- responding to state and local government requests for acquisition or use of public;
- land for community expansion,
- recreation, and public purpose activities;
- collection of data and entry into the Automated Lands and Minerals Records System (ALMRS);
- resolving cases of unauthorized use of public land;
- reducing case backlog; and
- processing of desert land entry applications and FLPMA Section 203 land sales.

Land exchanges, trading public land for state or private land, provide opportunities to simplify ownership patterns, improve respective management programs, acquire lands with high public values and meet both public and private needs. The land exchanges enhance both federal and non-federal land and resource management.

The amount of acreage acquired through exchanges has climbed steadily over the past 10 years. During FY 89, 74 exchanges were completed with BLM acquiring 385,567 acres. In exchange, the BLM conveyed 306,046 acres of public land. Among the more noteworthy exchanges included 12 effected with The Nature Conservancy in California that netted 17,000 acres to protect various threatened or endangered species.

A new law, the Federal Land Exchange Facilitation Act, was passed on August 20, 1988. The Act was intended to streamline processing and recognize all parties' interests. Proposed rulemaking to implement the Act was published in August 1989.

The Recreation and Public Purposes (R&PP) Act authorizes the federal government to lease or convey lands at no cost to state and local governments for public recreations purposes, and to lease

or sell lands to government and nonprofit entities for other public purposes at less than fair market value. In FY 89, BLM processed 161 applications under this act.

The BLM initiated a regulatory compliance audit contract during FY 89 involving active solid waste landfills leased under the authority of the R&PP Act. The audit will consist of a facility examination to assure compliance with state and federal regulations. A human health and environmental risk determination will be made as part of the examination. Through this process, BLM hopes to take an active approach in identifying

problems and resolving issues without creating hardships on local populations.

The automation of BLM's land and minerals records is progressing rapidly to meet a 1993 completion deadline. Automation of these records will make up a portion of the BLM's Land Information System (LIS).

During FY 89, BLM worked on and closed 1,286 trespass cases involving unauthorized use of public lands

The processing of Desert Land Entry Act applications constituted a major workload in Idaho and Nevada during FY 89. The BLM processed 144 Desert Land Entry cases during the year.

The BLM continued to make selected public lands available for sale to allow for community expansion and other purposes. Most of the land sold consisted of small, isolated parcels. Tracts were carefully selected through BLM's land-use planning process to ensure that sale was appropriate. During FY 89, 4,927 acres of public land were offered for sale at the appraised fair-market value.

The BLM patented 8,171.37 acres to four western states as part of their in-lieu selection entitlement. The in-lieu selected acres were owed to the states to replace state school lands that were included in federal reservations at the time of statehood. To make up for these lost school sections, Congress allows the states to select other similar lands from the public domain.

During FY 89, the BLM Eastern States Office began a four-year project to optically scan all the original land records from public domain states east of the Mississippi River. When completed, the land records will be available by legal description, name, land office, and date. The project will involve approximately 5 million original patents.

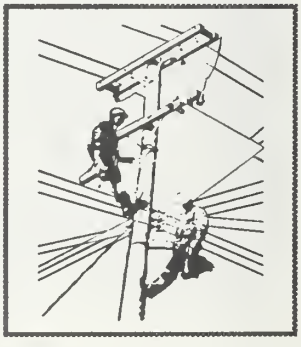
ACQUISITIONS

During FY 89, BLM completed 215 acquisition actions of land or interests in land in support of its resource programs. These include 157 road easements to provide public access to public land. The remaining acquisitions were for administrative access and projects.

Land and Water Conservation Funds were used to acquire 32 parcels of land which enhance BLM recreation and conservation programs.

RIGHTS-OF-WAY

One of the more frequent uses of the public land is for the construction of transportation, storage, and communication facilities. The BLM authorizes and manages such use through right-of-way grants. There are approximately 70,600 right-of-way authorizations for use of the public land currently in effect. These range in size from a few square feet for very minor facilities to large tracts of land on which massive projects are built such as the Alaska Pipeline, the All-American Pipeline from California to Texas, or the 54,000 acre evaporation ponds used to produce magnesium from waters of the Great Salt Lake.



The BLM authorized 2,648 new rights-of-way in FY 89. Types of facilities authorized include petroleum pipelines and related facilities; water lines; electrical transmission lines; roads; telephone lines; communication sites for radio, microwave, and other broadcast facilities; and, hydropower facilities.

Holders of most rights-of-way pay rental for the use of the public land; nearly $4 million in right-of-way rental was collected and forwarded to the general fund in FY 89. This does not include rental for oil and gas pipeline rights-of-way which is paid into the same fund as oil and gas lease rentals and other fees.

Applicants for a right-of-way also pay part of the cost for BLM to process the application. Cost recovery fees in the amount of $1,424,462.26 were collected in FY 89.

In addition to the more common types of rights-of-way, several states began work to authorize gathering systems for coal methane gas, an emerging and heretofore untapped source of energy from the public land.

WITHDRAWALS AND REVIEW

During FY 89, the Secretary of the Interior approved 16 withdrawals encompassing 43,769 acres in seven states to protect archaeological, geological, paleontological, recreational, and dam and reservoir sites. Also protected were air navigation sites and military research and radar transmitter sites. Of the 43,769 acres, approximately 14,178 were withdrawn to protect cave systems in Wyoming and Colorado. Another almost 13,000 acres were withdrawn for recreational and scenic values.

The Secretary approved 33 revocations encompassing 62,844 acres in 12 states. One revocation consisted of 59,029 acres of old, obsolete stock driveways in Idaho. There were six revocations in Alaska for 2,009 acres to allow selection of the land by the State of Alaska or native groups. The remaining revocations were approved to allow other actions which were in the public interest, such as exchanges to be completed. In addition, the Secretary modified 10 withdrawals encompassing 13,786 acres in four states mainly to transfer jurisdiction of withdrawn land from one federal agency to another.

On July 15, 1985, the National Wildlife Federation (NWF) filed suit in U.S. District Court challenging the withdrawal and classification processes and actions taken by BLM since January 1, 1989. A preliminary injunction was issued February 10, 1986, prohibiting nearly all activity on lands which were withdrawn or classified on January 1, 1981.

On November 4, 1988, the U.S. District Court dismissed the lawsuit because the NWF lacked standing to file a lawsuit. The court also lifted the preliminary injunction. The NWF subsequently filed an appeal with the U.S. Court of Appeals.

On June 20, 1989, the U.S. Court of Appeals ruled in favor of the NWF by overturning the district court's decision dismissing the suit. However, the appellate court did not reinstate the preliminary injunction, but instead requested that district court proceed quickly with a ruling on the merits of the case.

Because the outcome of this case could have a far reaching adverse effect on the government's ability to manage the lands entrusted to it, the BLM asked for a hearing by the U.S. Supreme Court. On October 18, 1989, the Solicitor General at the Department of Justice filed an appeal with the Supreme Court. The BLM is now waiting to see if the Supreme Court will agree to hear the case.

CULTURAL RESOURCES

The BLM is responsible for managing the federal government's largest, most varied, and most scientifically important body of cultural resources. No other agency rivals BLM in sheer quantity, diversity, or importance of cultural resources, known or projected. To date, approximately 150,000 archaeological and historic properties have been recorded on the 9 million acres of public land that have been inventoried. This represents roughly three percent of lands administered by BLM. Considering the number of acres of public land administered by the BLM, site totals are likely to run well into the millions.

Cultural resources are protected by numerous statutes, most significantly FLPMA, the National Historic Preservation Act of 1966 (NHPA) and the Archaeological Resources Protection Act of 1979 (ARPA). These laws establish the primary objectives of BLM's cultural resource program. The objectives are identification of the physical evidence of at least 10 millennia of human occupation in the western hemisphere, the evaluation of the relative importance of these physical manifestations and the determination and protection of the appropriate uses of these resources.

Looting and wanton destruction continue to threaten the very existence of the Nation's cultural heritage. By most professional estimates, there will be virtually no pristine cultural resources remaining by the year 2000 if we do not act immediately to combat the pervasive looting. Most of the uncontrolled destruction occurs for private gain.

Because of the ongoing threat to cultural resources from looting and destruction, in FY 89 the BLM's top priority continued to be the enforcement of ARPA and other statutes protecting cultural resources. In FY 89, the BLM devoted approximately one third of its operating cultural resource management program budget to site management and protection. The money was used for a combination of physical protection and administrative measures along with an aggressive public education and awareness program. Approximately 3,000 of the most vulnerable cultural properties received some direct, site-specific protection. Activities included signing, fencing, maintenance, interpretation, stabilization and patrolling or close monitoring on a regular basis. In addition, another 70,000 cultural properties and six million acres received some broad form of protection through a combination of vehicular, aerial, foot and/or horseback patrol and surveillance. Among the properties receiving protection were the more than 3,000 National Register of Historic Place properties, including the 20 National Historic Landmarks and five World Heritage List resources on public land.

In FY 89, BLM continued to augment the number of rangers and their role in patrol and surveillance. "Site stewards" were used to monitor properties and areas where disturbance was occurring. In addition, properties were protected through administrative withdrawal, cooperative protection agreements such as those with the Arizona National Guard and the Civil Air Patrol for aerial surveillance of properties, and cooperative management agreements or challenge cost share projects with universities, historic preservation groups, volunteer organizations, and nonprofit groups. These projects involved a broad range of identification, stabilization, and interpretation activities.

The level of public interest in the BLM's cultural resource management program is reflected in the program's level of volunteer activity. Volunteers form the backbone of many cooperative projects undertaken by BLM with state and local governments, individuals, and public and private groups under challenge cost share agreements. Volunteers significantly expand BLM's management capabilities in the areas of inventory, protection and study of cultural resources on public land.

It is estimated that through the efforts of volunteers alone the BLM received in excess of 45 work years of contributed time for the benefit of the program. The cultural resources program ranked second only to wildlife in this area, receiving 14 percent of all contributed time. The dollar equivalent amounted to more than $750,000. This represented an increase of more than 186 percent since 1986, the first year in which volunteer statistics were kept. In the same time period, the number of volunteers working in the cultural resources program more than tripled, while the number of hours contributed to the program increased almost 160 percent. These increases are particularly signifi-

cant because, during the same period, the BLM's cultural resource program budget decreased.

In the realm of public awareness and education, BLM was an active participant in "Historic Preservation Week" activities in Arizona, New Mexico, Utah, and Idaho. BLM also participated in other outreach activities in Oregon through Operation S.A.V.E. (Save Archaeological Values for Everyone) and in many local communities through the efforts of the BLM's field office cultural resource specialists. At the national level, BLM continues to participate in the Society for American Archaeology-sponsored anti-looting initiative, "Save the Past for the Future."

In FY 89, far more than half of BLM cultural resource staff time was devoted to compliance with section 106 of the National Historic Preservation Act of 1966 in response to approximately 8,000 land use applications. This allowed BLM archaeologists to learn much about previously unknown or poorly understood areas.

To ensure that Section 106 review was completed in a timely and responsive manner on the large number of land use applications, BLM issued approximately 350 cultural resource permits to individuals, consulting firms, and educational institutions. These entities completed various cultural resource inventories and mitigation work on BLM-licensed or approved projects.

WILDERNESS RESOURCES

BLM now manages 25 wilderness areas in eight states totaling approximately 465,000 acres. The total includes two new areas in New Mexico, designated in December 1987, of 82,000 acres of which are managed on an interagency basis between the National Park Service and the BLM. They are integral units of part of a national monument and national conservation area.

In FY 89, BLM continued the preparation of the final wilderness study reports that serve as the major documentation for the statewide wilderness reporting packages. An additional ten final wilderness EISs for study areas were filed with the Environmental Protection Agency during FY 89 with the remaining EISs to be completed during FY 90.

All work on the statewide reporting package for California has been completed and is scheduled for approval by the Secretary of the Interior and submis

sion to the President and the Congress in FY 90. Additional statewide packages for the states of New Mexico, Nevada, Idaho, Colorado, and Wyoming are scheduled for Secretarial review and decision in FY 90.

During FY 89, BLM participated in the observance of the 25th Anniversary of the Wilderness Act. A 25th Anniversary Conference was held at the University of Minnesota under sponsorship of an interagency group including the Forest Service, National Park Service, Fish and Wildlife Service and BLM, all national wilderness preservation system agencies.

Congress has not acted on a package of 30 areas submitted by the President in April 1985.

RECREATION RESOURCES

The Bureau of Land Management stands at a crossroads in the management of the public land. While the agency remains committed to serving its traditional constituents, efforts have begun to direct BLM's focus towards achieving a better balance in its management programs. A critical element of this effort is the implementation of the Bureau's long-range recreation initiative, Recreation 2000: A Strategic Plan.

Recreation 2000 offers the BLM vast opportunities to involve the public in the management and enjoyment of their land. The Bureau's move to seek out new constituents is in response to the rapid changes in population and social conditions that have taken place in the United States over the past 40 years. Today's visitors are more likely to be from an urban setting. Their knowledge of their ties to the land largely reflect the urban experience. Consequently, the public has little understanding of land management principles or the role the public land plays in providing food, fiber, and other

necessary products. Despite this lack of understanding, the public continues to come to the public land in ever increasing numbers for outdoor recreation. With more than 60 million recreation visits occurring on BLM-administered public land each year, the agency has direct access to many more people than could ever be reached through traditional channels. However, for the BLM to be successful, it must seek out new constituents who are not only knowledgeable of the BLM and its multiple-use mission, but customers who support the agency when its mission comes into question. Recreation 2000 : A Strategic Plan serves as an important vehicle to reach the public and

tell the story of multiple-use in a context they understand and in a setting in which they can be comfortable.

The BLM Director approved the Bureau's Recreation 2000 Implementation Plan on January 23, 1989. This plan identified 100 actions which are required to implement BLM's new recreation policy and plan approved in FY 88.

Under the framework of the National Recreation 2000 plan each state was required to develop a State Recreation 2000 Strategic Plan and implementation schedule. This has been completed. Implementation costs were estimated through the year 2000.

As part of implementing Recreation 2000, the recreation program initiated three major initiatives: Back Country Byways, Adventures In The Past and Watchable Wildlife in cooperation with the Bureau's Wildlife program.

Back Country Byways: This program, an outgrowth of the Scenic Byways program, is designed to formally identify a network of Back Country Byways. The purpose of this initiative is to encourage greater use of the highly scenic back country roads that traverse public land. It will increase awareness and visibility of the varied land that BLM manages and provides BLM with the opportunity to tell the multiple use story.

The back country byway network features roads and trails that are accessible by passenger cars, pickup trucks, four-wheel drive vehicles, motorcycles and snowmobiles. So far BLM has identified 34 Back Country and Scenic Byways in the 11 western states. It is expected that another 80 to 100 designations will be made by the end of Fiscal Year 1990. The BLM is seeking partners at the national, state and local level to assist in developing maps, roadside exhibits, signs, and other features that will enhance the visitors' experience as they tour these scenic routes.

Through an agreement with the American Recreation Coalition, the BLM received assistance with the back country byways program from large corporations such as American Isuzu Motors and the Farmers Insurance Group of Companies.

Adventures In The Past: This initiative focuses on the unique cultural heritage found on BLM administered land. It provides an opportunity for visitors to learn how the public land has been used since humans first set foot in the New World. This initiative provides a chance to raise the public's awareness of the irreplaceable and fragile nature of cultural resources while, at the same time, enhancing the visitors' recreational experiences on public land. The BLM is encouraging each state office to seek opportunities to develop at least one Adventures in the Past project that will allow the public to experience some exceptional aspect of our cultural heritage.

Watchable Wildlife: This is a joint initiative with the wildlife program. Watchable Wildlife is designed to take advantage of the public's diverse appetite for outdoor recreation and their desire to learn about and experience wildlife first hand. Its purposes are to enhance recreational wildlife viewing opportunities, promote public education about wildlife and its needs and foster support for wildlife conservation and management. Watchable Wildlife is also a valuable way for the BLM to establish partnerships

with state and local governments, wildlife and recreation organizations, volunteer groups and local communities. Finally, it affords the Bureau the opportunity to showcase its commitment to balanced multiple-use on public land.

In FY 89, public land accommodated more than 60.9 million recreation visits, an increase of six percent over FY 88, and more than 493 million visitor hours, approximately the same as in the previous year. During FY 89, 405,300 volunteer hours from 8,124 volunteers were contributed to the recreation program with a savings to the federal government of more than $5.6 million.

Overall during FY 89, 72,193 camping and day-use permits were issued, a 19 percent increase over FY 88. An additional 9,651 special recreation permits were issued, a 30 percent increase over the previous year. More than $1.58 million in fees were collected. This represents an eight percent increase in fees collected over last year.

Through FY 89, approximately 89.3 million acres of public land were designated open to off-road vehicle use, subject to special operating requirements. Approximately 45.4 million acres were designated for limited off-road vehicle use while 2.9 million acres were closed to off-road vehicle use. An additional 29.8 million acres are currently awaiting final implementation with 11.8, 17.2, and eight million acres proposed for open, limited, and closed designation, respectively. There are 108.3 million undesignated acres remaining.

During 1989, BLM initiated a pilot challenge cost sharing program in recreation management to encourage private contributions for high priority trail maintenance and improvement. Funds in the amount of $177,000 were allocated to 14 projects in nine different states. The estimated input from the private partners in these projects is $301,000. Private funding ranged from the California State Bonding Initiative, "Proposition 70" and Wyoming Centennial Commission funds to funding from private individuals and groups. Private input also included labor and materials in some instances. The type of projects ranged from rehabilitation of 10 miles of the Lost Coast Trail in the King Range National Conservation Area to installing a bridge which was donated by the Forest Service on the Alpine Gulch trail project in Colorado.

During 1989, BLM New Mexico completed the acquisition of the 2,852 acre A. B. Cox Ranch in cooperation with The Nature Conservancy. Through this acquisition in the Organ Mountains, east of Las Cruces, BLM was able to consolidate valuable units of public land, key areas of which will be developed for public recreation. To celebrate this accomplishment and to focus attention on New Mexico's natural heritage, the Organ Mountains Festival was held in August attracting more than 8,000 visitors. This was also a partnership effort with The

Nature Conservancy with proceeds going to the management of the Organ Mountains.

In the White Mountain National Recreation Area in Alaska, two more rustic public use cabins were constructed, enabling expanded winter use of BLM's first National Recreation Area. Another shelter cabin was constructed on the Iditarod National Historic Trail, providing safe haven for inter-village travelers, as well as for competitors involved in the annual Iditarod Sled Dog Race.

Five of Colorado's spectacular roadways were designated as the state's first Scenic and Historic Byways in 1989. Development of Colorado's own Scenic and Historic Byways program paralleled that for development of BLM's own byways program. Governor Roy Romer signed Executive Orders establishing the Scenic and Historic Byways Commission in March as BLM began working with local communities to establish National Back Country Byway Committees. These committees assist BLM in nominating back country roadways on the public lands. Colorado BLM is furthering cooperative efforts by utilizing challenge cost share funding to stimulate the building of additional partnerships on byways.

Wyoming signed an interagency agreement with the Bureau of Reclamation to take over the management and operation of the recreation facilities on Fontenelle Reservoir. A permanent transfer of responsibility is expected in 1991. The BLM will acquire responsibility for one major fee campground, a few relatively minor camping facilities and some day-use areas. The Bureau of Reclamation will provide $30,000 to $40,000 annually to cover expenses through 1992.

Arizona received a major grant from the California's Boating and Waterway Commission. This grant represents the first time BLM has received money from this source. It involves two projects, the Squaw Lake Enhancements and the Rock House Boat Ramp. The Squaw Lake Project includes the reconstruction of an outdated ramp and the enlargement of the parking lot to service a lake adjacent to the lower Colorado River just north of Yuma. The estimated cost of this project is $450,000. The Rock House Boat Ramp will be a new facility and the only public access to be constructed along the Parker Strip. The estimated cost for this project is $750,000. These funds are generated from boating registration and marine fuel taxes. Both projects are planned for completion in 1990.

ALASKA PROGRAMS

In FY 89, the BLM in Alaska patented more than one million acres of land to the State of Alaska under the State-

hood Act, bringing the total acres transferred to approximately 83 million. Title to about one million acres was transferred to Alaska Native corporations in FY 89 to meet the requirements of the Alaska Native Claims Settlement Act. The Native regional and village corporations have received approximately 36.3 million acres to date. The conveyance of land to the State of Alaska and Native corporations satisfies one of BLM's top objectives. In addition, continued efforts to transfer individual parcels of land to Alaska Natives successfully led to more than 755 certificates of ownership being issued under the Native Allotment Program.

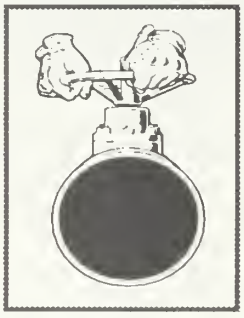
Field surveys were completed for 628 Native allotments, small tracts and 3,825 miles of rectangular net. Work proceeded allowing placer mining to continue in the State. An environmental impact statement (EIS) for a fourth watershed affected by placer mining was completed in May, 1989. A right-of-way was issued for development of a gas pipeline from the North Slope south to the tidewater in October, 1988. The proposed resource management plan and final EIS for the Central Arctic Management Area/Utility Corridor was completed in September, 1989. Alaska BLM is in the process of resolving the protests which were received during the 60 day protest period.

ENERGY AND MINERALS PROGRAMS

OIL AND GAS

Oil and Gas Leasing

The Mineral Leasing Act of 1920, as amended, and the Mineral Leasing Act for Acquired Lands of 1947, as amended, give the BLM authority to issue mineral leases on about 600 million acres of public land including national forests and private land where mineral rights have been retained by the federal government. The oil and gas leasing program has undergone significant modifications since the passage of the Federal Onshore Oil and Gas Leasing Reform Act in 1987. Under the Act, all public land that is available for oil and gas leasing must first be offered through a competitive leasing process whereby BLM state offices offer oil and gas parcels through oral auctions. Parcels that are not sold at these auctions are then available for noncompetitive leasing for a two-year period.



Since the enactment of the Reform Act, BLM has conducted a total of 67 competitive lease sales in which 23,027 tracts covering 24,608,896 acres were offered and 6,690 parcels involving 4,993,070 acres received bids. In FY 89, the BLM issued 7,388 leases covering 6,116,605 acres. As of September 30, 1989, there were 81,159 leases in effect on approximately 66.5 million acres.

Noncompetitive leasing activity is significantly greater than originally anticipated. About 45 percent of all leases and 53 percent of all acreage leased under the Reform Act have been issued noncompetitively. For FY 89, BLM issued approximately 3,255 noncompetitive leases covering approximately 3.3 million acres following competitive sales conducted pursuant to the Reform Act.

During FY 89, the Secretary of the Interior granted rental rate reductions to adjust the rental to $1 per acre for all onshore oil and gas leases except those issued under the provisions of the Reform Act and those reinstated under the provisions of the Federal Oil and Gas Royalty

Fiscal Year 1989 Oil and Gas Leases

	Leases	*Acres*
Competitive	4,133	2,775,881
Noncompetitive	3,255	3,340,724
TOTAL	**7,388**	**6,116,605**

Management Act of 1982. The action became effective March 1, 1989, and will continue through February 29, 1992, unless, after considering factors related to rental rates such as the level of development of federal leases, economic conditions in the oil industry, and the level of imports, the Secretary makes the decision to terminate the rental reduction at an earlier date. It was anticipated that a uniform rental reduction to $1 an acre would keep more lands under lease and provide additional capital for exploration and development.

Oil and Gas Operations

The BLM is responsible for the approval and inspection of drilling, production and abandonment operations on federal leases to ensure compliance with regulations for protection of the surface and subsurface environment, public health and safety, and proper accountability of oil and gas production for federal and Indian leases. As of September 30, 1989, there were approximately 64,500 producible completions, that is, wells demonstrated capable of producing oil and gas in paying quantities, on federal and Indian leases. During FY 89, there were 1,200 producible wells completed.

Federal oil and gas leases generated about $567 million in bonus, rent, and royalty payments to the federal government in FY 89. Fifty percent (or in the case of Alaska, 90 percent) of this revenue generated from the public land is returned to the states where production occurs. Approximately $69 million in bonus, rent, and royalty payments were generated from Indian leases in FY 89. These payments are distributed to the various Indian tribes and individual Indians. Another Department of the Interior agency, the Minerals Management Service (MMS), collects and distributes these receipts.

The BLM is developing a series of nine Onshore Oil and Gas Orders. Order No. 1, Approval of Drilling Operations, was published in 1983, and is being revised to be consistent with the subsequent Orders and the Leasing Reform Act of 1987. Order No. 2, Drilling Operations, was issued in final form on November 18, 1988. Order No. 3, Site Security, Order No. 4, Measurement of Oil, and Order No. 5, Measurement of Gas, were issued in final form on February 24, 1989. Order No. 6, Hydrogen Sulfide Operations, Order No. 7, Disposal of Produced Water, Order No. 8, Well Workover/Completion/Abandonment and Order No. 9, Waste Prevention/Beneficial Use, are being developed to provide oil and gas operators with detailed guidance, instructions and requirements for operating on leases under BLM supervision.

The BLM is working with MMS and Bureau of Indian Affairs (BIA) to address the concerns of the Senate Select Committee on Indian Affairs regarding production accountability for Indian leases. The BLM is evaluating additional ways to improve the effectiveness of its

inspection and enforcement program to ensure proper measurement and accounting of oil and gas production beyond initiatives which were already in progress. During FY 89, trainees from various Indian tribes and the BIA attended courses in BLM's inspector training program.

The low oil price situation that began in 1986 continued through 1989. For this reason, BLM extended the suspension of production requirements on stripper/marginal well leases for another year to prevent premature abandonment of oil and gas wells and potential loss of recoverable reserves. As of September 30, 1989, there were 491 such leases in suspension, representing about 2.5 percent of the producible federal leases.

The BLM continued its aggressive program to identify all wells that are potentially draining federal and Indian resources. The recommendations of the Drainage Policy Review Team that was established in 1988 are still being implemented. The task force that was established to revise the drainage manual/handbook and incorporate the recommendations of the Drainage Review Team has completed its work with the revised manual/handbook in the final editorial stages. Until the revised manual/handbook is issued in final form, the draft manual/handbook will continue to be used as an interim guide. The BLM's computer-based Potential Drainage Detection System is being revised and enhanced for broader use in the BLM.

GEOTHERMAL

Geothermal Leasing

The Geothermal Steam Act of 1970 provides BLM authority to issue leases on public, withdrawn, and acquired lands administered by the Departments of the Interior and Agriculture. This Act was modified by the Geothermal Steam Act Amendments of 1988, enacted on September 22, 1988.

The BLM conducts competitive geothermal lease sales for land located in Known Geothermal Resource Areas. In FY 89, competitive lease sales were held in California and Nevada, resulting in BLM's issuance of 9 competitive leases covering 15,850 acres. During this time, 59 noncompetitive leases covering 91,565 acres were also issued.

Fiscal Year 1989
Competitive Geothermal Leases

	Leases	*Acres*
California	130	215,839
Nevada	51	90,434
Utah	17	30,265
Oregon	8	16,565
New Mexico	3	2,861
Idaho	2	3,061
Total	**211**	**359,025**

Fiscal Year 1989
Noncompetitive Geothermal Leases

	Leases	*Acres*
Oregon	159	235,920
Nevada	158	269,873
California	111	158,386
New Mexico	16	26,816
Arizona	11	18,146
Utah	9	18,032
Colorado	3	2,751
Idaho	1	640
Total	**468**	**730,564**

Interim final geothermal regulations amending existing regulations were issued on April 6, 1989, to implement the Geothermal Steam Act Amendments of 1988 (Public Law 100-443). This law provides new opportunities for qualifying lessees to extend their leases for up to 10 years beyond their primary terms. The lessees are required to demonstrate bona fide efforts to produce or utilize geothermal resources and agree to either make payments in lieu of commercial quantities production or make significant expenditures during the period of extension. The regulations also provide specific requirements for the protection of significant thermal features, such as Old Faithful Geyser, in certain units of the National Park System. Thirteen leases were extended in FY 89 under the new Act. Many more leases will be eligible for extension in the next two years.

Geothermal Operations

Development of geothermal resources in the United States in FY 89 was concentrated on federal leases. Construction of new geothermal electrical generating facilities on federal land continued at a fast pace. At the end of FY 89, geothermal production totalled 1,059.6 megawatts (MW) on federal land. California produced 725 MW from The Geysers, 107 MW from East Mesa, 78 MW from Coso Hot Springs, and 8 MW from Wendel-Amedee. In Nevada, 70 MW from Dixie Valley were produced, 16 MW from Beowawe, 15 MW from Steamboat, 10 MW from Desert Peak, 4.8 MW from San Emidio, and 3.6 MW from Soda Lake. Utah produced 20 MW from Roosevelt Hot Springs and 2.2 MW from Cove Fort.

Proposals for FY 90 and beyond have been received in California for two

power plants, one at Glass Mountain and one at China Lake. The Pacific Lighting Energy System Unit I (PLESI) plant at Mammoth Lake has been approved and construction will begin in the spring of 1990, coming on line in 1991. Nevada has received proposals for two 15 MW expansions, one at Soda Lake and one at Steamboat. A utility company in Nevada, Sierra Power Company, is offering an 80-100 MW potential utilization for geothermal power. Future development depends on negotiations between operators and Sierra Pacific.

During FY 89, geothermal leases and associated operations generated about $16 million in bonus, rent, and royalty payments to the federal government. Like oil and gas, 50 percent of the lease-generated revenue is returned to the state in which the leasing and production activity occurs.

COAL

The BLM serves as the focal point of the Department of the Interior's federal coal management program and is responsible for ensuring coordination with state and local governments, industry, conservation groups, and other agencies concerned with the management of federal coal. The Mineral Leasing Act, as amended, FLPMA, and the Surface Mining Control and Reclamation Act of 1977, provide the statutory bases for the federal coal management program.

The BLM manages one-third of the Nation's coal resources underlying 75.6 million acres of public lands, predominantly in the western states:. These western federal coal lands contain approximately 60 percent of the total western reserves. Most of these federal coal reserves are concentrated in five western states: Colorado, Montana, New Mexico, North Dakota, Utah, and Wyoming.

At the end of FY 89, there were approximately 16.03 billion tons of recoverable reserves on 516 federal coal leases. During FY 89, there were 123 producing federal coal leases, which produced 211.4 million tons. This production represented 22 percent of the total United States production in 1989. Federal coal royalty revenues collected by the Department of the Interior totaled $186.8 million in FY 89. Coal production on Indian lands totalled 29 million tons with royalties of approximately $49 million in FY 89.

Coal Leasing

During FY 89, there were two lease-by-application sales, one in Utah

and the other in West Virginia. These sales covered approximately 9,925 acres of land containing 84.2 million tons of recoverable coal reserves. The sales generated bonuses of $16.25 million.

In addition, 29 coal preference right lease applications (PRLAs) were rejected by BLM. This brings to 62 the number of coal PRLAs remaining to be processed.

At the end of FY 89, there were 516 federal coal leases covering 778,241 acres of federal lands. In addition to these leases and PRLAs, five mining licenses and five exploration licenses are being administered by BLM.

Coal Operations

In the 68 years since the Mineral Leasing Act was enacted, more than 1.9 billion tons of coal have been produced from federal land. The market value of this coal was nearly $20 billion on which royalties exceeding $1 billion have been paid to the U.S. Treasury. Since 1920, more than 432 million tons of coal have been produced from Indian land. That coal was valued at more than $4.8 billion and generated more than $249 million in revenue for Indian tribes and allottees.

The BLM has statutory and regulatory responsibility for oversight of coal mining operations on federal and Indian land. This responsibility includes providing technical assistance to Indian tribes, allottees, and the Bureau of Indian Affairs, including preparing economic, resource, and mining assessments and analyses; evaluating exploration and mine plans; supervising exploration, development and abandonment of operations; recommending bonds; and conducting inspection and enforcement and production verification.

One responsibility on federal lands is administering 20 logical mining units (LMUs). An LMU is a designated area from which the coal can be developed as a unit and as part of a single mining operation. An LMU may consist of federal leases only or of federal and non-federal land (including Indian land), must be contiguous, and cannot exceed 25,000 acres in size. During FY 89, BLM approved three of these 20 LMUs and 10 LMU applications were being processed at the end of FY 89. During FY 89, BLM also processed 27 readjustments of lease terms and conditions and 24 record-title assignments on federal coal leases.

The primary purposes of inspection and enforcement (I&E) are to ensure compliance with the law, regulations,

lease terms and conditions, exploration or mine plans, and all notices and orders; identify any trespass; and conduct production verification. Production verification (PV) is the process of establishing the accuracy of mineral production reported for royalty payment. The process comprises two essential elements: to check reported production against mine and other records using the company method to determine accuracy of production measurement; and to make an independent engineering determination using one or more alternate methods to assess the accuracy of the reported production. The PV's primary goal is to verify the amount of coal being mined and to ensure that production is accurately reported, thereby ensuring that proper royalties are paid for the extraction of coal on federal and Indian lands.

Implementation of national I&E/PV guidelines for coal and other solid minerals in FY 87 included formation of Solid Minerals Assistance Teams (SMATs) to help promote consistency and monitor compliance with the guidelines. During FY 89, the SMAT visited the Oregon State Office and the associated field offices to review mine-specific I&E/PV plans, inspection procedures and methods of production verification. In addition to the SMAT, an Internal Control Review (ICR) for I&E/PV on federal lands was conducted in two coal producing states, Wyoming and Montana. The significance of production verification will continue to increase considerably as federal coal royalty revenues increase from increased production, and federal lease readjustments occur, raising the royalty rate from cents-per-ton to the statutory *ad valorem rate*. Several BLM field offices are exploring the potential for computerizing production verification procedures and other methods of ensuring accuracy and reliability of the production verification program.

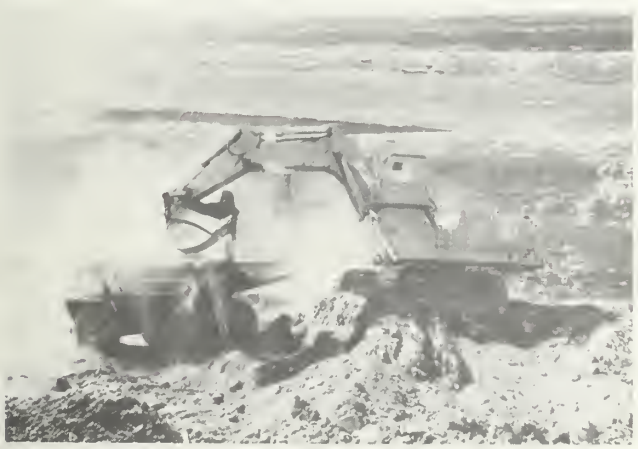
Alternate Internal Control Reviews (AICRs) of BLM procedures used in overseeing the operations of the federal coal management program were also conducted in the state offices of Arizona, Colorado, Eastern States Office, Montana, New Mexico, Utah and Wyoming. The objectives of the AICRs were to identify waste, fraud, and abuse in field implementation of programs, highlight any problems with existing guidance and develop ways in which the existing guidance could be improved. The AICRs included I&E/PV on Indian land, diligence, bonding, and royalty reduction procedures.

The BLM is continuing to draft proposed revisions to the Federal Coal Management Rules (43 CFR Group 3400). Some revision is necessary to clarify issues that have arisen since the rules were published in final form in 1982. These revisions pertain primarily to operations, but will also impact several other aspects of the Federal Coal Management Program. There will be minor grammatical changes to Part 3400—General and 3410—Exploration Licenses; minor technical changes to Part 3420—

Competitive Leasing (concerning confidentiality) and Part 3440—Licenses to Mine (concerning the duration of a mining license); and overall consolidation and restructuring of subject matter. The primary areas of consideration are 43 CFR Part 3450—Management of Existing Leases (lease readjustments, cancellations, and relinquishments); Part 3470—Coal Management Provisions and Limitations (e.g., rent, royalty, and bonding); and Part 3480—Coal Exploration and Mining Operations (e.g., diligent development, continued operation, and advance royalty).

OIL SHALE

The Mineral Leasing Act gives the Secretary of the Interior the authority to lease oil shale on federal lands. BLM has the federal management responsibility for 80 percent of the oil shale resource concentrated in the Green River Formation



in Colorado, Utah, and Wyoming. The reserves in this 25,000-square-mile formation are estimated to contain nearly 2 trillion barrels of shale oil. Approximately 731 billion barrels of oil could be recovered with current technology. However, with present technology, the cost of extracting the oil makes it noncompetitive against conventional energy sources.

The only two existing oil shale leases, tracts C-a and C-b in Colorado, were in suspension during FY 89. The lessees maintained the mines and related facilities and monitored the environmental effects while the leases were inactive.

SOLID NONENERGY LEASABLE MINERALS

The BLM supervises activities of lessees and permittees who explore, develop, and produce solid nonenergy leasable minerals on federal and Indian lands. At the end of FY 89, there were 549 Federal leases comprising 639,725 acres, plus 88 prospecting permits covering 80,817 acres. In addition, there were 31 preference right lease applications covering approximately 42,659 acres. The combined production of solid nonenergy leasable mineral commodities from federal and Indian land was valued at $902 million. From federal land, this resulted in more than $32 million in royalty revenues to the U.S.

On federal land, more than 85 percent of the acreage and nearly 80 percent of the leases for solid nonenergy leasable minerals involve potash, sodium and phosphate.

As part of BLM's program oversight responsibilities, during FY 89 the Solid Minerals Assistance Team (SMAT) visited the Arizona State Office to review Inspection and Enforcement/Production Verification (I&E/PV) procedures relating to Indian copper operations and the Eastern States Office to review I&E/PV procedures relating to federal lead-zinc operations in Missouri.

MINERAL MATERIALS

The BLM's mineral materials program, also referred to as the salable minerals program, began with the passage of the Minerals Act of July 31, 1947. In 1955, Congress amended the Act by specifying that common varieties of previously locatable minerals, such as sand, gravel, and stone, were to be disposed of under the provisions of the 1947 Act. Since that time, the BLM has disposed of mineral materials either by sale to the general public or by free-use permit to

Nonenergy Leasable Minerals

	Leases	*Acres*	*Tons*	*Value*
Potash	206	335,044	2.0 million	$ 3.6 million
Sodium	100	120,646	4.5 million	15.7 million
Phosphate	136	85,833	4.6 million	3.3 million

Other Nonenergy Leasable Minerals

Mineral	**States**
Uranium	*Arizona, New Mexico, Washington, Wyoming*
Lead/zinc	*Missouri*
Copper	*Arizona, Minnesota, Oklahoma, Washington*
Sand/grave	*Arizona, California, Montana, Nevada, New Mexico Oklahoma, Oregon, So. Dakota, Washington, Wyoming*
Tar sand	*Utah*
Gilsonite	*Utah*
Gold	*Arizona, Idaho, Washington*
Flourspar	*Illinois*
Limestone	*New Mexico, Oklahoma, Utah, Virginia*
Titanium	*Minnesota*
Silica sand	*Arizona, California, Nevada, Oklahoma*
Feldspar	*Georgia*
Clay	*Alabama, Missouri*
Barite	*Arkansas, Missouri*
Chat	*Oklahoma*
Gypsum	*California, New Mexico*
Asphalt	*Oklahoma*
Tungsten	*Nevada*
Bentonite	*Wyoming*
Quartz	*California, North Carolina*
Amethyst	*Georgia*
Garnet	*Idaho*
Granite	*Oklahoma*
Iron Ore	*Idaho, Minnesota*
Olivine	*North Carolina*
Quartz crystals	*Arkansas*
Combined Hydro-carbons	*Utah*
Crushed stone	*Washington*
Dimension stone	*Oregon*

qualified government or non-profit organizations as provided in the Act.

In FY 89, nearly four million cubic yards of mineral materials, valued at approximately $2 million, were produced from 1750 sales and free-use permits.

MINING LAW ADMINISTRATION

The Mining Law of 1872, as amended many times in its 117-year history, serves as the statutory basis for the disposition of locatable minerals from federal land. Federally owned locatable minerals include valuable deposits of precious metals, base metals, strategic and critical minerals, industrial minerals (such as cement-grade limestone and bentonite) and uncommon varieties of building stone and other mineral materials. In addition, oil shale, which is now disposed via the Mineral Leasing Act of 1920, may be held, worked and patented under the mining laws if claim location and discovery of valuable deposits preceded 1920. Mining claims located for sand and gravel and other common varieties located prior to the 1955 Congressional amendment of the Materials Act of 1947 also exist.

The self-initiation feature of the Mining Law continues to serve the Nation's mineral industry well. This is evident in the responsiveness of mining industry exploring the public land and locating mining claims as the market for locatable mineral commodities demands. In recent years, increased demand, and therefore price, of gold combined with improvements in mining methods and lower extraction costs, have led to a mining claim boom on public land in the West, particularly in Nevada, California and Arizona. As an extension of the increased gold mining in those states, exploration for gold has also increased in demand and price, some of the old copper mines have been brought into production again. The exploration effort for copper deposits has increased significantly on existing properties.

Almost 148,000 new claims were accepted for recording by BLM during FY 89. The BLM issued 36 patents for lode, placer and millsite claims, for a total of slightly less than 19,500 acres. Of the top 25 gold mines, 14 were either totally or partially on lands managed by BLM.

The increased interest in gold caused greater activity on public land, and the BLM continued to be challenged to provide for mineral exploration, development and extraction of energy and mineral resources under multiple-use management, while preventing unnecessary or undue degradation of the public land.

Also in FY 89, BLM began an extensive review of its bonding, reclamation and cyanide policies.

SUPPORT SERVICES

ENGINEERING SERVICES

When BLM was established in 1946, it inherited its physical facilities from its parent agencies, the General Land Office and the Grazing Service, along with a primitive road system that reflected the miscellaneous needs of ranchers, mining companies, railroads, and county and state governments. Since the mid-1960s, BLM has constructed numerous roads and trails necessary for administration of the public land. Where suitable leasable office and other facilities are not available, BLM has constructed its own office buildings, warehouses, shops, and other facilities tailored to the agency's resource management responsibilities.

In FY 89, BLM began work on the Alaska Fire Service building, the Flagstaff Hill Visitor facilities, the Yaquina Head Road in Oregon, Quail Hill Road in Arizona, and sanitary facility upgrading at various recreation sites in Montana. Other projects such as major road maintenance, recreation site work, and building repair work were also done. In addition, BLM continued an extensive long-range maintenance inventory and condition survey program that will be continued into FY 90.

The BLM provided maintenance to about 140 office buildings, more than 800 other BLM-owned buildings and associated water and sewer systems, approximately 800 developed family unit recreation sites, 5,000 undeveloped (without water) sites, approximately 10,000 miles of roads, more than 1,000 miles of trails and 30 bridges.

Surface and subsurface maps in 1:100,00 scale providing coverage for most of the land it administers are available through BLM. Photogrammetric and remote sensing support was provided by the BLM Service Center in Denver as well as within each state. Automation of cartographic functions was continued in FY 89 and has become an integral part of BLM's programs for automating its resource data.

Additional support was provided through survey and design of various range improvement and watershed construction projects. The BLM continued its dam inventory and hazard assessment programs in FY 89.

PLANNING

The Federal Land Policy and Management Act of 1976 provides for the development and maintenance of land use plans for the public lands. Special emphasis is placed on public participation. In 1979, planning regulations (43 CFR Part 1600) were issued establishing resource management plans as the basic planning document. Other legislation

containing planning requirements include the National Environmental Policy Act of 1969, the Federal Coal Leasing Amendments Act of 1976, the Surface Mining Control and Reclamation Act of 1977, and the Public Rangelands Improvement Act of 1978.

Planning helps the local BLM manager, public land users, and others resolve resource management conflicts and land use issues. The BLM seeks to improve resource management decisions on the public land through a planning process that includes participation by the public and federal, state and local governments; use of the best available data; and analysis of alternatives. Resource management plans are designed to guide and control management actions relating to the increasingly competitive demands for public land, while at the same time protecting and ensuring their long-term productivity.

Sixty-one resource management plans had been approved by the end of FY 89. An additional seven plans were in final form and awaiting state director approval. Thirty-two more are underway. The BLM also issued draft plans for nonmilitary uses of four military withdrawals that were extended by Congress in 1986. With 61 plans completed, BLM is placing increased emphasis on plan implementation, monitoring, and maintenance.

In FY 89, BLM issued a NEPA (National Environmental Policy Act) handbook stressing that the resource management plan/environmental impact statement is BLM's primary vehicle for environmental assessment. Guidance is provided for more detailed analysis for specific action in this process.

In May, 1989, BLM sent a delegation to the State Land Administration of the People's Republic of China to discuss a long-term exchange of people and knowledge about land use planning and land information systems.

Areas of Critical Environmental Concern

The Federal Land Policy and Management Act requires that BLM give priority to the designation and protection of areas of critical environmental concern (ACEC). Such areas are designated to protect and prevent irreparable damage to important historic, cultural, or scenic values; fish and wildlife resources or other natural systems or processes; or to identify natural hazards. Natural areas may also be designated under FLPMA to maintain natural diversity and provide for scientific research.

Areas of critical environmental concern are identified through BLM's planning process. Appropriate management prescriptions for each area are developed and tailored to reflect the site-specific resources and local circumstances. Protection of the identified values is ensured whenever subsequent uses are undertaken or authorized.

During FY 89, 81 ACEC designations were made. This raised the amount of public land accorded designation to more than 6.6 million acres and reflected BLM's vigorous commitment to the appropriate use of this designation and management authority. A new manual to aid the identification, evaluation, and designation of ACECs was issued in September

1988. The manual, based on an earlier public and Bureauwide review of proposed revisions, completed an effort to improve BLM's existing ACEC guidance.

FIRE

Fire has always been a natural part of the environment. As emphasized by the Fire Management Policy Review task force report, prepared at the direction of the Secretaries of Agriculture and Interior following the Yellowstone fires of 1988, BLM manages fire from two aspects: wildfires that cause negative impacts and must be suppressed and prescribed fires that can be used to achieve positive resource management objectives. The BLM uses fire as a major tool in accomplishing multiple-use objectives while totally suppressing only the damaging and unwanted wildfire.

The BLM is responsible for fire management on more than 380 million acres of Federal and nonfederal lands in 10 western states and Alaska. The fire program also contributes significantly to the development of new technology in the areas of firefighting equipment, aircraft, and automated systems.

The BLM is also the host agency for the Boise Interagency Fire Center (BIFC) in Idaho. This is the national wildfire support center, providing support to agencies of the Departments of Interior and Agriculture, the Department of State (for assistance to foreign nations), and to state governments.

During FY 89, 1,938 wildfires were recorded on BLM administered land. This number is nearly 18 percent lower than the annual average of 2,350 wildfires, and the acreage burned, 230,529 acres, was less than one-quarter of the 1 million acres burned in an average year.

The 1989 wildfire season was characterized by partial relief of the four-year drought in many areas. Drought conditions, however, continued in southern California, the southwest and some areas of the northern Rockies. Alaska experienced one of the lowest fire occurrence years on record, while activity in the southwest approached record levels. Generally, the 1989 fire season was far less active than any of the previous four years. The total number of wildfires reported to the Boise Interagency Fire Center was 48,949, compared with an average of 78,137 wildfires each of the past four years. Fires in 1989 burned 1,827,310 acres, compared with the past four-year average of 3,267,974 acres burned.

Sparked mostly by lightning, a rapid build-up of fire activity occurred in late July in central Idaho and eastern Oregon. The highest level of mobilization occurred during this period. Normal firefighting capability was fully committed, and 5,871 military personnel were called in to support the firefighting effort. This included four battalions of Army troops,16 UH-60 helicopters and three UH-1 helicopters. In addition, eight

National Guard C-130 aircraft equipped with Modular Airborne Firefighting Systems were utilized for aerial retardant on fires in Arizona and California.

The BIFC supported 688 wildfires during the 1989 season, down from the record 1,700 wildfires supported in 1988. The 1989 total includes three Canadian wildfires and 150 BLM wildfires. In addition to wildfires, other activities also supported by BIFC included the Valdez Oil Spill in Alaska, Hurricane Hugo and a train accident in Russia.

Firefighting continues to be a highly dangerous profession. Within BLM, every component of the fire management program is analyzed and approached with safety in mind. During the 1989 wildfire season, no fatalities or major accidents were reported, leading to an outstanding safety record for the season. The BLM continued participation in the National Wildland/Urban Interface Initiative again in 1989 and also participated as a sponsoring agency for the first international conference addressing the problems of wildfire protection in the growing interface zone. This conference, "Meeting Global Wildfire Challenges," brought together wildland fire experts from more than forty nations to share problems and successes. The group looked at strategy for meeting the growing problem of private structures located throughout the wildland areas. In addition, over 100 educational and informational booths provided views of new technology and shared both successes and challenges in meeting this worldwide problem.

Prescribed fire projects in BLM increased over the 1988 accomplishments, but acres treated was short of the annual average of 700 projects treating 100,000 acres. In 1989, 859 prescribed fire projects were conducted treating 78,176 acres. The majority of the projects were conducted in Oregon where 706 projects treated 22,278 acres. The majority of these burns were associated with forestry on the Oregon and California lands in western Oregon. Of the total acres treated on BLM administered land, 24,854 acres were treated to accomplish range improvements; 18,438 acres were treated for wildlife habitat improvement; and 17,897 acres were burned to accomplish forestry objectives.

BLM continued progress in implementing the Initial Attack Management System during 1989. Primary emphasis was in the area of enhancing the Remote Automatic Weather Station network across the western states. In addition, plans were developed for upgrading computer equipment beginning in 1990, and for combining the Alaska and lower-48 States systems into a single system.

AVIATION MANAGEMENT

During FY 89, the natural resource management programs in the BLM accomplished more than 27,000 hours of flight time at a cost of about $21 million. The overwhelming majority of BLM aircraft services were provided through competitive bid contracts with the private sector.

A satellite based computerized aircraft tracking system was tested by the Bureau in FY 89. The effectiveness of the system exceeded all expectations. During FY 90, the BLM will begin to implement this new technology.

Also during FY 90, BLM will continue to evaluate the satellite-based flight tracking system for use in Alaska. Implementation of the flight following system will begin in the lower-48 states. Continued emphasis on individual accident prevention plans and development and delivery of new aviation user and manager training will be emphasized.

LAW ENFORCEMENT AND RESOURCE PROTECTION

BLM's law enforcement and resource protection program began in 1976 with the passage of the Federal Land Policy and Management Act (FLPMA). FLPMA directs BLM to enforce laws and regulations relating to the public lands and its resources, and to protect the life and safety of the people who use the public lands.

In addition to FLPMA, BLM enforces provisions of other laws including the Archaeological Resource Protection Act (ARPA), the Wild Horse and Burro Act, the Wilderness Act, and the Wild and Scenic Rivers Act.

The agency employs special agents and law enforcement rangers to enforce the laws on the public lands. In addition to their formal education, all law enforcement personnel hired by the BLM are required to complete an intensive law enforcement training course at the Federal Law Enforcement Training Center in Brunswick, Georgia.

BLM's special agents, or criminal investigators, deal with the more serious crimes on the public lands. Special agents investigate criminal law violations using such techniques as surveillance, undercover work and electronic monitoring.

BLM's rangers are uniformed law enforcement officers who provide patrol on the public land. Using marked vehicles, they enforce the applicable laws on the public lands, dealing primarily with misdemeanor violations.

During FY 89, BLM special agents and law enforcement rangers continued efforts with other federal, state and local agencies to eradicate illegal drugs from public land in California, Oregon and other western states. The BLM also increased its efforts to enforce ARPA by emphasizing the investigation of destruction, theft and sale of archaeological artifacts.

FY 1989 Drug Enforcement Activity on the Public Lands

States	No. of Sinsemilla* Plants Seized	No. of Marijuana Plants Seized	No. of Drug Laboratories Found	No. of Drug-Related Arrests
Alaska	0	25	0	0
Arizona	23	0	2	1
California	22,523	517	1	8
Colorado	752	324	0	12
Eastern States	0	0	0	0
Idaho	420	0	1	0
Montana	0	70	0	1
Nevada	0	0	0	0
New Mexico	135	0	1	8
Oregon	16,600	0	5	8
Utah	0	412	0	0
Wyoming	0	0	0	0
Totals	40,537	1,280	10	36

* Domestic sinsemilla (a kind of marijuana) has THC (active ingredient/ hallucinogenic) levels routinely at 11 - 15 percent and as high as 18 percent. Imported marijuana has a THC of about 2 - 4 percent. The Drug Enforcement Administration values a pound of sinsemilla at about $3,000.

HAZARDOUS MATERIALS

The Hazardous Materials Management Program's goals are the protection of public health, safety, and the environment, compliance with applicable laws, and the control of federal liability.

The program is based on the requirement for compliance with the Resource Conservation and Recovery Act, as amended, which requires treatment, storage, and disposal of hazardous wastes; the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, which regulates cleanup of spills and abandoned waste sites; and other federal and state laws that regulate the management of hazardous materials.

During FY 89, program activities for hazardous materials management continued in all BLM state offices. Field officials were involved in 48 emergency hazardous substance cleanups on the public land.

Other significant accomplishments for the year included continuing inventories to identify or confirm the presence of hazardous materials on public land and preparing 59 land status assessments. The BLM also completed 51 preliminary assessments of site risk and 22 site inspections in FY 89; issued contracts for six major intermediate studies in New Mexico, Idaho and California; and continued the Remedial Investigation/ Feasibility Study contract in New Mexico.

Other activities in FY 89 included continuing the National Academy of Engineers evaluation of the program and providing training in hazardous materials program management and safety to field staffs. The BLM worked with state regulatory agencies to identify and conduct appropriate levels of risk assessments at potential hazard sites on public land and provided technical support to other programs on compliance with hazardous materials laws and liability control.

It should be noted that BLM's potential liability for nearly all hazardous materials sites derives from private or state or local government uses of public land. The BLM is seldom either a generator or transporter of hazardous substances or a hazardous waste facility operator. In some cases, primarily mining sites, BLM will be an "innocent landowner" for purposes of the law, but may still have cleanup responsibility for abandoned sites because, by law, the Environmental Protection agency (EPA) cannot expend Superfund monies to cleanup sites on federal lands. This limitation on EPA makes it imperative for BLM to find financially viable responsible parties to cleanup the problems which those parties created.

In FY 89, the program supported two major new initiatives: one, a contract to supply broad program technical assistance and another to conduct audits of the compliance of local government operated landfills on the public lands, with federal and state solid waste management laws. The latter activity is designed to assure compliance with the Resource Conservation and Recovery Act and the recently passed amendments to the Recreation and Public Purposes Act.

CADASTRAL SURVEY

As established by law, BLM's Cadastral Surveying Division has the ultimate responsibility for all public land and boundary surveying. Its work extends

beyond the survey and resurvey of public land, authority for which goes back to the Land Ordinance of 1785. With perfecting changes, its rectangular principles were enacted into law under the Constitution in the Public Lands Act of 1796 and have been carried forward to 43 USC 751. Consequently, there is a nationwide dimension to BLM cadastral surveying. Its crews are in the field from Florida to Maine, from Maine to California, and from California to Alaska. BLM's cadastral surveyors continue to introduce changes in their ancient art to take advantage of emerging technology.

The BLM maintains all official Public Land Survey System records covering 30 States. Because private surveyors are constantly making resurveys and subdivisional surveys, these records are in steady demand as the basis for the new surveying, even in states which have long since ceased to be public land states.

Field accomplishments during FY 89 include surveying 3.1 million acres, of which 2.4 million acres were original surveys and 800,000 acres were resurveys. Ninety-nine percent of the original surveys were Alaska statehood grants or Alaska Native Claims grants. The remainder were mostly public land and Indian land surveys. The resurveyed acres were principally public land and National Forest land, but included Indian land and Federal reclamation land.

To provide on-the-ground identification and to yield simple, precise descriptions for legal records for the 3.1 million acres, BLM surveyors ran 11,340 miles of survey lines, marked them with 15,790 monuments, and filed 1,453 sets of plats and field notes, the definitive legal record of the surveys. In Alaska, one-third of the original surveys and many special surveys were contracted to private survey firms. The BLM directed the work and approved plats and field notes after ascertaining that the survey was done in accordance with the Manual of Surveying Instructions, 1973.

Efforts are continuing to automate the collection of field survey data for direct entry into the automated plat and field note preparation system. It is expected this effort will reduce the number of errors inherent in the current manual system, thereby increasing productivity.

Public Land Survey System/Geographic Coordinate Data Base (PLSS/GCDB) testing continues in the New Mexico State Office. Activities to this point have consisted of the development of standards and procedures for initial data collection; testing of various collection methods; development of requirements and specifications for the data collection contracts; support in the contract evaluation process; training on data collection methods; and development of data collection plans.

Staffs were put in place in the state offices to prepare for the data collection. Contracts for initial data collection were awarded in September 1989. There is one

contract for nine western states, which may include the eastern states. There is a separate contract for Alaska and an in-house collection effort in Oregon.

VOLUNTEERS AND OTHER CONTRIBUTED SERVICES

Volunteer services, as authorized by the Federal Land Policy and Management Act, continued a steady increase during FY 1989, with a 32 percent growth over FY 1988.

Volunteers serve BLM in diverse ways. They improve habitat for fish and wildlife; assist recreational visitors to the public lands by serving as trail and river guides; build or maintain trails and campgrounds; improve range and forestland by planting trees and other vegetation; conserve soil and water resources by improving water sheds; perform mapping, research and other tasks to support mineral and energy planning and development; and, assist with administrative support by operating computers and other office equipment.

FY 89 volunteer statistics include the following:

- Volunteers contributed 771,048 hours of work, 32 percent more than in 1988.

- Contributed services were valued by BLM's field managers at more than $6.5 million, 11 percent more than in FY 88.

- Associated costs to the government were estimated at $585,243 indicating a benefit-to-cost relationship of 11 to 1.

- Each volunteer worked an average of 41 hours; 1 out of 3 were female; 10 percent were more than 55 years old; and 30 percent were under 18 years of age.

Hosted Workers

BLM also recruits "hosted workers," or people who work for BLM and are paid wages by another entity. One example of such a program is the Senior Community Service Employment Program, a federal-state program through which low-income older persons can work for public or community service organizations and be trained on the job while paid minimum wage.

In FY 1989, BLM's field managers were assisted by 1,066 hosted workers, who served 310,286 hours and accomplished work valued at $2.7 million. Incidental costs to BLM were estimated at $134,801.

INFORMATION RESOURCES MANAGEMENT

Within BLM, Information Resources Management (IRM) includes automated data processing (ADP), telecommunications, records and information security. The program is currently in the process of developing policies, standards and procedures for managing technological tools to improve management of BLM's information resources and to assist public land resource management.

Intensive work on the Automated Land and Mineral Record System (ALMRS) modernization project will be continued as BLM field offices increase their efforts to standardize data, services, and information technology center operations to implement the target system in FY 93. Data administration became an established BLM program in FY 89. Data modeling techniques were used to define the information requirements of the BLM and will be used as a basis for establishing Bureauwide data standards.

To augment operations during the interim period prior to deployment of the target system, the BLM is acquiring additional computer resources to support its state office minicomputers and mainframe computer in Denver, Colorado. Over 70 PRIME minicomputer systems in state, district, and resource area offices and over 4,400 microcomputers Bureauwide are bolstering BLM's evolving automation requirements. The need for applying graphics capabilities for processing spatial data and developing business related graphics have increased at an astonishing rate.

An integral part of the IRM program is to conduct management reviews of the field office program activities.

During FY 89, BLM completed an Information Resources Management Review for Oregon and initiated reviews in the Arizona, Alaska and Eastern States organizations.

Automated data processing and information security is of growing concern to BLM. With the passage of the Federal Computer Security Act of 1987, BLM began developing a comprehensive Information Security Program. The program includes identification and protection of BLM's data from unauthorized access and development of security plans for sensitive systems.

Risk analyses for ADP and continuity of operations plans (COOP) were continued in FY 89 and will be carried forward into FY 90 with comprehensive, on-site plans being developed. This effort involves extended contingency operations between BLM offices and expanded cooperation with other agencies. This will expedite security planning and ensure that BLM maintains its automated records using the most secure means possible. Certain categories of BLM information will be designated as public, thus clarifying public access to BLM data and records. This procedure affords greater public access without having to undergo Freedom of Information Act procedures. A Bureau work group was convened to develop specific policies on all access issues and, in particular, issues related to automated records. New BLM policies and procedures to fully address access issues and the Computer Security Act will be developed during FY 90.

During FY 89, the National Archives and Records Administration joined in a task force with BLM to identify future records transition issues. This

group will solve problems arising from moving intensive manual records systems into the automated technologies of the 1990s. Records management principles and practices will be integrated with the ADP life cycle management process to ensure that BLM data created in electronic recordkeeping systems will be preserved for future generations.

During FY 90, detailed records inventories completed earlier will be consolidated and the BLM's records status will be accurately defined using a new, microcomputer-based system. Together with an accurate inventory of BLM's electronic records, this comprehensive tool for managing information will enhance responding to public inquiries.

The overall IRM program will continue progress into FY 90 for more distributed automation resources, enabling BLM's field offices to have increased computer, telecommunications and records management capability. This will improve "on-the-ground" management and service to the public. One innovative means to improve BLM's IRM operations, together with its technical expertise, is a new IRM trainee program, conceived in 1987. This is designed to provide cross-training in the fields of ADP and communications. With completion of the program, participants will have acquired the skills necessary to successfully manage all the technical IRM disciplines required at state offices, the Service Center, Boise Interagency Fire Center IRM Branch, or Washington Office staff levels. Two trainees were selected during FY 88 at approximately 6 month intervals with a third being employed during the summer of FY 89.

In telecommunications, BLM has continued to reduce its subscription to consolidated telephone service provided in major metropolitan areas by the General Services Administration in favor of BLM owned and maintained systems. This will result in projected savings in the BLM's state offices of $4.5 million dollars over the next 11 years.

AUTOMATED LAND AND MINERAL RECORD SYSTEM

A basic responsibility for the last 200 years has been the maintenance of the land and mineral records for the public land. These official documents are the basis for legal authorizations to use the public land, including thousands of applications annually for oil and gas leases and rights-of-way. The BLM is now automating access to the information on these records, replacing hand-drawn plats and procedures that, in some offices, date back to the beginning of the country.

Implementing the Automated Land and Mineral Record System (ALMRS) is a major effort. In FY 89, work progressed toward the eventual issuance of a Request for Proposal (RFP). The BLM also initiated a Master Plan for Automation to tie together all automation projects. The Master Plan will contain both the BLM's strategic and tactical plans for automation.

To prepare managers and key staff for implementing automation, four "Automation for Managers" courses were held in FY 89. Over 200 BLM employees participated in these courses. A training needs analysis has also been completed to evaluate training needs in preparing end users of the new automation systems.

Other accomplishments in FY 89 include:

• The status data collection effort is on schedule and complete in most of the western states. Alaska's collection efforts began in FY 89 and will be completed in FY 90.

• The Eastern States Office (ESO) is considered the largest land title office in the world. It houses the original patents and supporting documents for lands that were part of the original "Public Domain" in 1789. These include lands won from the British during the American Revolution (Ohio, Michigan, Indiana, Illinois and Wisconsin), lands that were part of the Spanish possessions (Alabama, Mississippi and Florida) and lands that were purchased from France in 1803 (Louisiana, Arkansas, Missouri, Iowa and Minnesota). Patents, deeds that transfer land ownership from the U.S. Government to a buyer, and tract books, records showing how, when and to whom title to the public domain passed, dating back to 1790, represent the only record system used by the United States to show original grants.

• In FY 89, ESO entered into an interagency agreement with the Department of Energy's Office of Scientific and Technical Information to use their expertise and existing skilled contractor, Science Applications Corporation, to develop a prototype system to optically scan the General Land Office Records. Information was stored to discs which provides optimum data retrieval and allows for the original documents to be protected. The estimated four-year project is entitled "Preserving America's Heritage" and has been endorsed by the Commission on the Bicentennial of the U.S. Constitution. Using records from Arkansas for the prototype, 323 volumes of patents including 163,000 documents will be automated in early FY 90.

• The State of Texas does not have a standard base map. Surveys were done on a metes and bounds system which is much more complex than the rectangular system used in most states. No centralized records were maintained as federal agencies purchased land and mineral rights making it difficult to determine the extent of federal holdings in Texas. Research completed by the BLM had shown around 2.6 million acres of acquired land, but its location was largely unknown.

A program known as the Texas Acquired Mineral Project (TAMP) was begun in 1985 to inventory records to locate federal estate. That project now includes a cooperative agreement between BLM and the Texas Railroad Commission (TRRC). Through the agreement, the BLM is supporting a TRCC project to produce computer generated digital well location maps for certain areas in Texas. In return, the TRCC is providing BLM with automated base map data for mapping federal minerals. The BLM is on a production-line basis, producing automated maps of some Texas counties. Three of the targeted counties have been completed. While TAMP has already paid for itself in the amount of money returned to the treasury in mineral royalties, it is also assisting BLM in its efforts to offer federal oil and gas leases for competitive bid in Texas.

• Coordination efforts are underway with other agencies to enhance data sharing. This will assist in avoiding duplication of efforts and in the development of data standards. New Mexico BLM has entered into agreements with McKinley County,

New Mexico, and Meridian Oil Company to pilot-test on-line data access to BLM's information. McKinley County is using on-line access to the Farmington Resource Area data base to construct base maps which are then field checked and supplemented. This data is being used to construct an accurate "Rural Addressing" information system needed for emergency services to respond more quickly to calls for help. McKinley County is representative of many counties with heavily fragmented land ownership patterns. Because collection of taxes, maintenance of roads, law enforcement, and other standard services provided at the county level are all tied to land ownership information, cooperation with BLM is offering the county a relatively inexpensive way to resolve its ownership confusion.

• The Geographic Coordinate Data Base pilot contract for data collection was issued in September, 1989. The contract provides for an initial testing and acceptance performance period in New Mexico with expansion of the contract to other states in subsequent years.

• The BLM has selected an information engineering approach to data management to get data ready for automation efforts. This approach involves a three phase process which begins with an Enterprise Data Model (EDM). The EDM, which consists of a general overview of the way BLM does its business, was completed in 1989. Each operational function of the BLM was identified and diagrammed, including data needs and relationships between functions. Both the second phase, Mid-level Analysis, and the third, a detailed analysis of the data and the process, are ongoing.

• Alaska's BLM has been working on interim software development to get data ready to terminate use of the Burrough's computer. This software, when implemented in 1990, will permit Alaska and the lower 48 states to use common data standards and computer systems for the first time. The reduction of confusion and costs will be substantial.

• The Case Recordation portion of ALMRS is operational in all BLM public rooms, thus providing the public with automated access to land and mineral case file abstracts and serial register pages. Public acceptance of the automation has been successful.

GENERAL ADMINISTRATION

MANAGEMENT AND PRODUCTIVITY INITIATIVES

During FY 89 the BLM continued several initiatives designed to improve the productivity of its programs and employees. The Productivity Pilot Program, a three-year program to improve the quality of worklife for employees, establish a more aggressive organization, provide more responsive resource management and improve the quality of work and productivity, concluded its second year of implementation in four districts. As a result of testing and positive experiences in these districts, Susanville, California; Butte, Montana; Roswell, New Mexico; and Rock Springs, Wyoming, six initiatives were selected by the Bureau Management Team for Bureauwide implementation. These include health, wellness and fitness; flextime; performance evaluation anniversary date flexibility; increased procurement authority; self-monitoring compliance; and single travel authorization. As the Productivity Pilot Program continues, additional successful pilot initiatives will be recommended for Bureauwide application.

The BLM increased its participation in the Department's Productivity Enhancement Fund (PEF) Program which is designed to fund low cost, innovative productivity improvement projects which promise rapid payback and a high rate of return, as well as transferability potential. During FY 89, the BLM funded five new PEF projects and began realizing savings in funds and workmonths from several projects approved the previous year. In recognition of a particularly effective PEF project, portable personal computer use in wildlife monitoring and inventory data collection, the two Utah BLM employees who developed the project received one of two Secretarial PEF awards presented for the first time this fiscal year. Expanded use of innovative ideas developed and successfully tested through the PEF program promises to result in improved productivity throughout the Bureau.

PROCUREMENT AND PROPERTY MANAGEMENT

During FY 89, BLM spent $114 million for goods and services. This includes approximately $54 million for 1,367 contract actions in excess of $25,000 and $58 million for 28,000 small purchases of $25,000 or less. In addition, BLM completed a test using bankcards for small purchases. The program is now being operated permanently under GSA authority. Field employees completed over 11,000 transactions worth nearly $2 million using 800 cards. This technique reduces paperwork, permits over-the-counter transactions and guarantees the vendor fast payment.

BLM continues to exceed its goals in various socioeconomic procurement programs. The Bureau completed development of requirements for an Automated System for Acquisition Processing (ASAP) to automate all procurement operations, from requisition to close-out, produce necessary reports and interface with financial management and property systems. In FY 90, BLM will work on the design phase of the project. The ASAP project requirements have also been included in the Bureau automated data

processing modernization project. In the interim, the BLM will procure a small purchasing and reporting system to introduce its procurement personnel to automation until the procurement system is developed.

In FY 88, a new uniform program was launched to improve the public's identification with BLM and its objectives. It is designed to improve BLM's overall image and to promote esprit de corps among BLM employees and volunteers.

To support this program, BLM implemented the congressionally approved maximum uniform allowance of $400 per individual per annum in FY 89. This amount allows authorized BLM employees to order uniforms in amounts not to exceed $400 per year and is consistent with authorization limits allowed for the National Park Service, U.S. Forest Service, and U.S. Fish and Wildlife Service. About 3,450 employees received a uniform allowance in FY 89.

Procedures were also developed to reduce the administrative costs for processing orders and invoices for items issued to employees and volunteers which are not considered as part of the uniform allowance. These items include such things as nameplates, baseball caps, and volunteer vests. They help to further the identification and recognition of BLM employees and volunteers.

Additionally, a uniform videotape was released to BLM offices titled "The Time Is Right," which depicts, from the BLM field employee's point of view, how the program benefits the Bureau, the public and the employees' ability to do their jobs.

In FY 89, BLM began establishing data bases to track permanent directives such as manual sections and handbooks. It is designed to ensure efficiency in responding to inquiries regarding the currency and reliability the BLM Directives System. This initiative was in response to a general management evaluation conducted in FY 88 which identified a need to provide a more current and

reliable source of guidance and direction to the field.

Several initiatives began in FY 89 to improve the Bureau's sign programs. Policy memoranda stated the objectives of the program, assigned responsibilities to area managers for developing sign needs, and provided procedures for budgeting, planning, ordering, and maintaining

signs. A signs design committee was established to develop standards and design criteria for categories of Bureau signs. A new Bureau identification sign was developed, as well as a group of signs and logo for the Back Country Byways program.

PERSONNEL MANAGEMENT

The BLM's Division of Personnel in the Washington Office concentrated much of its effort in developing personnel policies in connection with streamlining personnel services, career development programs and affirmative recruitment and position classification projects during FY 89.

To improve productivity through maximum use of human resources, BLM is continuing the implementation of its Careers Program. The program has six major components: New Employee Orientation, Employee Excellence, BLM Careerists' Professional Development, Management and Leadership and Advanced Leadership. The first two components are geared to all employees in the beginning and early stages of their careers and are designed to build an understanding of and commitment to BLM's mission and their role in that mission. The final four components focus on identifying and developing both a reserve of technological expertise and a body of high potential future managers and leaders.

During FY 89, BLM employed approximately 10,000 individuals. Special emphasis was placed on recruitment and retention of women and minorities

Socioeconomic Procurement Programs

CATEGORY	*GOAL ($000)*	*ACTUAL ($000)*
Awards to Small Business	59,445	56,864
Awards to 8(a) Firms	2,220	6,231
Awards to Minority Businesses (including 8(a)	4,530	7,664
Awards to Women-Owned Business	2,390	3,614
Setasides for Labor Surplus Area Concerns	18,560	19,001
Total	**87,145**	**93,374**

and position classification throughout. Primary concentration was placed on classification of positions related to the evolving functions in the Bureau's Land and Information System and modernization efforts.

In keeping with the Bureau's goal of improving its image and enhancing the public's knowledge of its programs, the Bureau conducted a comprehensive study of its publications preparation and production functions. Under the guidance of a field committee, comprised of all the associate state directors, the study team closely examined current practices and industry trends. They developed over 30 separate recommendations which would improve the efficiency and quality of the Bureau's publications program and enable the Bureau's message to reach more people with less effort and cost. The major results included establishing standard design formats for standard publications, such as brochures, pamphlets, environmental impact statements, and other public interest documents; developing hardware and software guidelines for publishing applications; recommending the skills and mechanisms needed to closely track the progress of a publication from concept, through text formulation and design, to printing and distribution; prescribing standard symbology for recreation and other public access maps; and, establishing pricing guidelines for publications which the Bureau makes available to the public for a fee. Many of these 30 recommendations have been implemented already; the rest will be refined and implemented during FY 90.

The Bureau-operated Department of the Interior Fleet Management System provided quarterly vehicle utilization management reports to the Department and the Bureaus during FY 1989. User requirements for an automated stores warehouse inventory management system were approved, with system design and implementation to start during FY 90. Electronic reporting of excess personal property to GSA was enhanced, with Bureau on-line internal screening of excess personal property to commence during FY 90. Use of bar code technology to accomplish personal property inventories was fully implemented. Electronic reporting of BLM owned and leased real property holdings to the GSA was implemented, using the GSA- developed FIRM system.

FINANCIAL MANAGEMENT

APPROPRIATIONS AND EXPENDITURES

The BLM programs are funded through six major operating appropriations, several minor permanent and trust appropriations, and reimbursements from other Federal agencies for work performed on their behalf. In addition, the BLM budget includes one annual appropriation and numerous permanent appropriations that provide funds to State and local governments in which federal land resources are located, either as payments-in-lieu of taxes or as shared revenues from the sale, leasing and disposition of resource commodities.

BLM FUNDING

BLM Funding — FY 1986-1989

	FY 1986	FY 1987	FY 1988	FY 1989
	(In Millions of Dollars)			
BLM Operating Appropriations	$457.8	577.1	593.76	632.1
Payments-in-Lieu of Taxes	99.9	105.0	105.0	105.0
Permanent Payments to States	141.0	81.4	156.4	127.0
Other Miscellaneous	4.7	5.9	7.3	7.5
Total	**$ 703.4**	**769.4**	**862.4**	**871.6**

Funding and obligation data on a program-by-program basis for BLM's principal operating accounts for Fiscal Years 1988, 1989 and 1990 are as follows:

Funding & Obligations by Program — FY 1988-1990

PROGRAM	FY 1988[1] Actual	FY 1989[1] Actual	FY 1990[2] Enacted
	(In thousands of dollars)		
Energy and Minerals (Oil & Gas, Coal, Mining Law Administration, Etc.)			
Appropriation	80,620	74,297	71,437
Obligation	80,378	74,293	—
Work Years	1,714	1,681	1,635
Lands, Realty & Rights-of-Way			
Appropriation	46,787	36,729	36,577
Obligation	46,740	36,724	—
Work Years	892	839	830
Forest Management			
Appropriation	7,281	6,685	6,674
Obligation	7,252	6,683	—
Work Years	127	138	124
Wild Horses & Burros			
Appropriation	15,485	14,560	13,598
Obligation	15,470	14,319	—
Work Years	152	156	125
Rangeland Management			
Appropriation	33,426	34,600	35,796
Obligation	33,393	34,592	—
Work Years	771	793	769

MANAGEMENT OF LANDS & RESOURCES

	FY 1988[1] Actual	FY 1989[1] Actual	FY 1990[2] Enacted
Soil, Water & Air			
Appropriation	13,879	14,741	15,146
Obligation	13,865	14,467	—
Work Years	237	253	231
Fish & Wildlife Habitat Management			
Appropriation	14,153	19,985	22,927
Obligation	14,139	19,986	—
Work Years	327	375	312
Recreation Management (Recreation, Cultural & Wilderness Resources)			
Appropriation	23,637	25,160	28,749
Obligation	23,613	24,645	—
Work Years	476	508	544
Resource Management Planning			
Appropriation	9,465	9,289	8,998
Obligation	9,337	9,283	—
Work Years	182	179	165
Information & Resource Data Management (Information Systems, ALMRS & Resource Data Acquisition)			
Appropriation	21,004	43,060	44,038
Obligation	20,983	37,231	—
Work Years	419	541	523
Resource Protection & Maintenance (Fire Mgmt., Cadastral Surveys, Resource Protection/Law Enforcement & Hazardous Materials Mgmt.)			
Appropriation	61,668	69,101	68,111
Obligation	61,212	68,580	—
Work Years	864	924	903

General Administration	FY 1988[1] Actual	FY 1989[1] Actual	FY 1990[2] Enacted
Appropriation	88,324	87,649	90,033
Obligation	88,236	87,635	—
Work Years	1,079	1,089	1,122
Emergency Operations[3] (Fire Presuppression and Firefighting, Fire Rehabilitation & Grasshopper/Mormon Cricket Control)			
Appropriation	105,598	72,876	0
Obligation	104,753	120,650	—
Work Years	1,031	926	0
Wildland Firefighting[3] (New Appropriation that will assume all firefighting responsibilities listed under "Emergency Operations" above)			
Appropriation	0	0	193,761[4]
Obligation	0	0	—
Work Years	0	0	820

[1] Appropriation amounts shown for FY 88 and FY 89 have been adjusted for comparability to reflect the revision of the Bureau's budget structure which took effect in FY 1989.

[2] FY 90 Enacted column does NOT reflect reductions resulting from sequestration under the Deficit Control Act (Gramm-Rudman).

[3] As of FY 90, Wildland Firefighting was established as a separate appropriation; it is no longer part of BLM's "Management of Lands and Resources" (MLR) appropriation. Grasshopper and Mormon Cricket Control will continue to be maintained under MLR through the use of carryover funds (monies which were appropriated during a prior fiscal year) as needed, therefore, no funding, or work years were requested or enacted for FY 90.

[4] This appropriation includes $94,261,000 to repay funds which were borrowed to cover FY 1989 firefighting costs. This new Wildland Firefighting appropriation is substantially more than previously enacted for firefighting, therefore BLM may not have to borrow as often to manage wildland fires as in previous years.

OREGON AND CALIFORNIA GRANT LANDS

Funding & Obligations for Oregon & California Grant Lands — FY 1988-1990

PROGRAM	FY 1988 Actual	FY 1989 Actual	FY 1990 Enacted
Western Oregon Resources Mgmt. (Forest, Timber, Fire Protection, Planning, Soil/Water/Air, Wildlife Habitat Mgmt., Rangeland Mgmt., Recreation)			
Appropriation	53,841	55,270	58,995
Obligation	53,733	55,169	—
Work Years	991	936	1,021
Western Oregon Information & Resource Data Systems			
Appropriation	1,367	625	1,574
Obligation	1,356	622	—
Work Years	9	10	11
Western Facilities Maintenance			
Appropriation	3,909	3,655	6,233
Obligation	3,835	3,499	—
Work Years	56	58	57
O&C Construction & Acquisition			
Appropriation	881	450	453
Obligation	857	411	—
Work Years	11	9	9

REVENUES AND RECEIPTS

BLM is a primary collector of federal revenues. Gross receipts from the lease, use, and sale of public land and resources totaled approximately $312.8 million in FY 89. Of this amount, $116 million will be returned to the states; $24.4 million was transferred to the Reclamation Fund; $2.4 million was transferred to other federal agencies; and, the remaining $170 million went into the general fund of the United States Treasury. Monies appropriated from the Treasury to BLM for operating expenses totaled $728.8 million in FY 89.

The development and use of BLM land and resources generate receipts from a variety of sources. Timber receipts totaled $253.2 million in FY 89. Receipts generated by other BLM programs, including sales of public land, grazing, right-of-way leases, permits, and rentals and other miscellaneous receipts have remained constant with receipts from past years.

State and Local Shares

BLM's most direct fiscal impact upon states that include public land is through revenue sharing and other direct payments. In the period from 1976 through 1989, state and local governments received nearly $4.5 billion from the Department of the Interior as their share of revenues collected from the lease or sale of public land resources and as in-lieu payments for tax-exempt lands.

Revenue Sharing

Revenue sharing payments are authorized by specific statutes, but may be subject to constraints mandated by the Gramm Rudman and Hollings Balanced Budget and Emergency Deficit Control Act of 1985 (Gramm-Rudman). For fiscal years in which the mandated restraints are in force, payments may be reduced or delayed until the following fiscal year. The amount of any reduction is determined in accordance with a calculation established by Gramm-Rudman. For FY 89, revenue sharing programs were not affected since there was no Gramm-Rudman sequestration.

Taylor Grazing Act revenues are distributed according to the type of land generating them. Of the fees collected from livestock grazing districts, 12.5 percent are distributed to the state for expenditure by the state legislature to benefit the counties generating these grazing receipts. Grazing revenues generated on public land outside the grazing districts are shared equally with the state. State legislatures have the authority to expand the funds to benefit the counties where grazing monies are collected.

Land sale revenues generated in Nevada under the Santini-Burton Act are collected and distributed on an annual basis. This Act authorizes the allocation of ten percent of gross revenues back to Clark County or the municipality in which these revenues are generated, and five percent to the State of Nevada. The remaining revenues are deposited in the Land and Water Conservation Fund for the purchase of environmentally sensitive land in the Lake Tahoe Basin.

Payments in Lieu of Taxes

Local government units within western states are the principal beneficiaries of the 1976 Payments in Lieu of

Taxes Act. This law was enacted to provide federal payments to those areas where large portions of land are in federal ownership and, therefore, are exempt from local property taxes. Serving as a supplement to revenue sharing funds, payments in lieu of taxes are made directly to local govenrments and may be used for any governmental purpose.

Lands eligible for payments in lieu of taxes are federally owned lands in the National Forest and National Park Systems; lands administered by BLM; lands dedicated to the use of federal water resource development; dredge disposal areas under the jurisdiction of the Army Corps of Engineers; National Wildlife Reserve Areas; inactive and semiactive Army installations; and certain lands donated to the United States Government. The Act specifically prohibits payments for land (but not certain donated land) that was tax exempt before being acquired from state or local government.

Since payments in lieu of taxes started in 1977, more than $1billion has been paid to local governments; about $104 million of that amount was paid in FY 89.

SUMMARY OF PAYMENTS IN LIEU OF TAXES BY STATES

State	1989 Payment
Alabama	$ 118,079
Alaska	5,532,754
Arizona	8,276,434
Arkansas	1,108,891
California	10,924,021
Colorado	6,820,584
Connecticut	18,272
Delaware	4,627
Dist. of Columbia	5,207
Florida	1,020,826
Georgia	681,401
Hawaii	36,263
Idaho	7,588,136
Illinois	219,611
Indiana	167,923
Iowa	127,491
Kansas	338,195
Kentucky	575,421
Louisiana	154,384
Maine	73,909
Maryland	36,738
Massachusetts	51,950
Michigan	1,302,362
Minnesota	882,904
Mississippi	384,912
Missouri	1,119,475
Montana	8,175,077
Nebraska	356,083
Nevada	6,103,596
New Hampshire	211,602
New Jersey	35,024
New Mexico	10,598,873
New York	40,393
North Carolina	1,294,200
North Dakota	552,906
Ohio	146,405
Oklahoma	780,986
Oregon	2,899,181
Pennsylvania	216,830
South Carolina	130,421
South Dakota	1,673,674
Tennessee	469,004
Texas	1,282,919
Utah	9,266,606
Vermont	233,297
Virginia	1,221,032
Washington	1,430,437
West Virginia	845,186
Wisconsin	372,031
Wyoming	7,856,811
Guam	7,827
Puerto Rico	80,417
Virgin Islands	2,477
Total	**$103,854,065**

Bureau of Land Management Receipts

	FY 1989 Actual	FY 1990 Estimated
States and Counties	$115,018,088	$116,000,000
Reclamation Fund	24,122,000	22,344,000
Tansferred to other Federal Agencies	2,408,000	2,500,000
Returned to BLM	36,604,000[1]	5,000,000[2]
Indian Trust Fund	8,412	8,000
General Fund	136,990,500	188,713,000
TOTALS	**$315,151,000**	**334,565,000**

1 Includes return of $30,092,562 from the "Excess Receipts" collected from the Oregon and California (O&C) Grant Lands as authorized in the 1990 Appropriations Act for the Department of the Interior and Related Agencies. Also includes $6.5 million in road maintenance fee collections in western Oregon.

2 Includes an estimated $5,000,000 in anticipated road maintenance fee collections in western Oregon.

ALLOCATION OF PUBLIC LANDS RECEIPTS

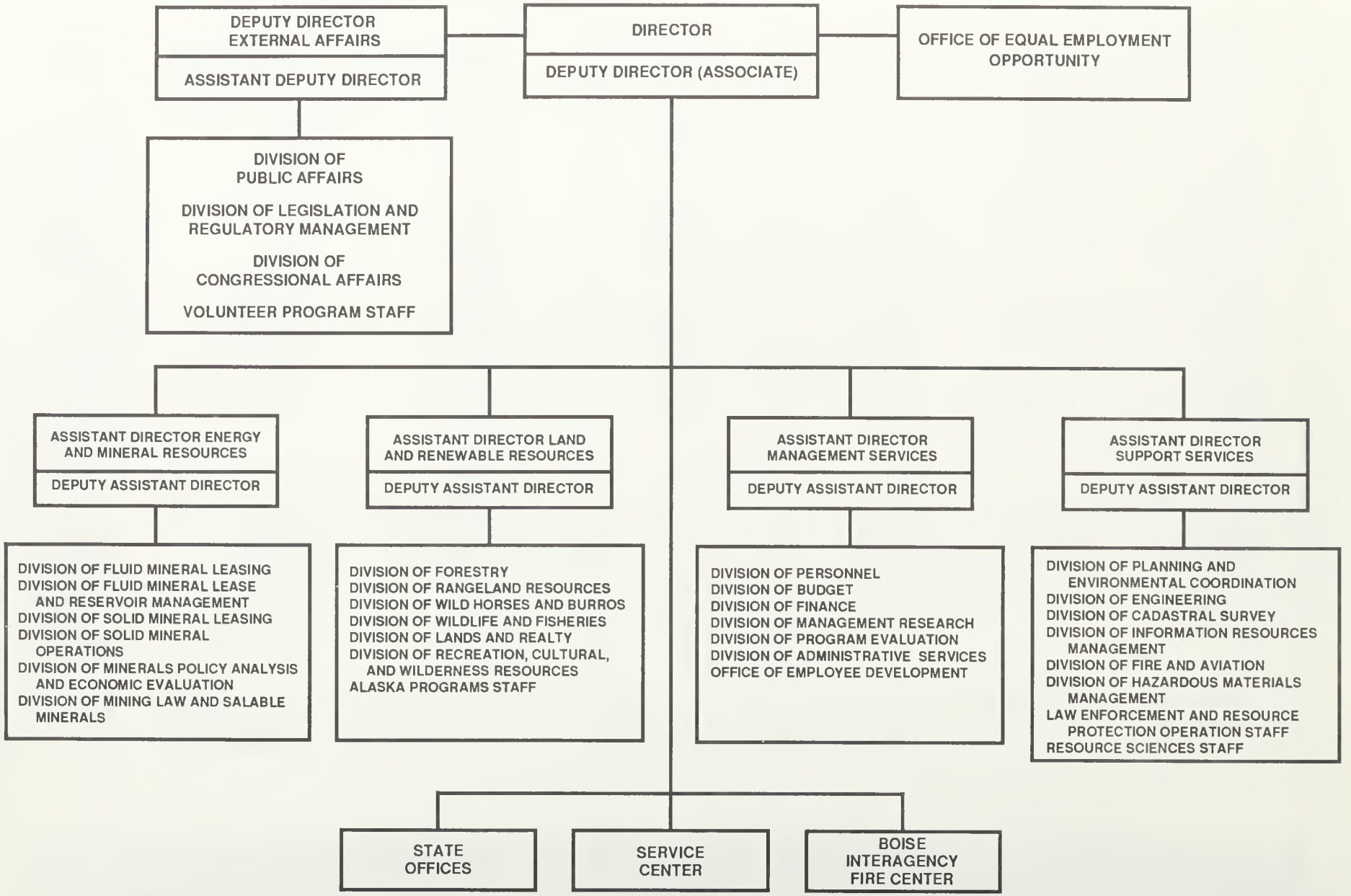
	FY 1989 Actual	FY 1990 Estimated
States and Counties	115,981,202	116,000,000
Reclamation Fund	24,365,672	25,968,000
Transferred to Other Federal Agencies	2,408,000	2,500,000
Indian Trust Fund	8,412	8,000
General Fund	70,031,494	169,492,000
TOTALS	**$212,794,780**	**$313,968,000**

Payment of BLM Receipts to States as of September 30, 1989

States	Mineral Leases and Permits	Forage Receipts Outside Taylor Grazing Districts	Forage Receipts Inside Taylor Grazing Districts	Sale of Public Land and Timber	Other	Total
Alabama	0	0	0	57	0	57
Alaska	837,459	0	0	2,562	0	840,021
Arizona	10,097	93,554	85,351	20,628	0	209,630
Arkansas	0	0	0	71	0	71
California	14,728	115,067	18,364	101,388	0	249,547
Colorado	1,556	22,125	71,986	10,032	0	105,699
Idaho	1,264	25,860	175,970	29,563	0	232,657
Kansas	0	0	97	0	0	97
Minnesota	0	0	0	524	0	524
Mississippi	0	0	0	8	0	8
Missouri	0	0	0	274	0	274
Montana	2,598	106,652	120,134	16,710	427,909	674,003
Nebraska	0	0	513	1,285	0	1,798
Nevada	576	306,373	21,379	345,984[1]	0	674,312
New Mexico	159,487	172,818	259,805	24,565	11,398	628,073
North Dakota	307	7,260	0	423	0	7,990
Oklahoma	5,651	111	0	452	0	6,214
Oregon	798	36,438	154,557	110,318,270[2]	0	110,510,063
South Dakota	98	53,848	0	218	0	54,164
Utah	11,726	254	170,874	31,599	4,165	218,618
Washington	0	19,373	0	9,706	0	29,079
Wisconsin	0	0	0	40	0	240
Wyoming	0	344,163	188,660	39,215	0	572,038
Totals	**$1,046,345**	**$1,303,896**	**$1,267,690**	**$110,953,774**	**$443,472**	**$115,015,177**

[1] Includes $0.3 million for Santini-Burton land sales.
[2] Includes $108.8 million for Oregon and California Grant Land and $0.9 million for Coos Bay Wagon Road timber receipts.

BUREAU OF LAND MANAGEMENT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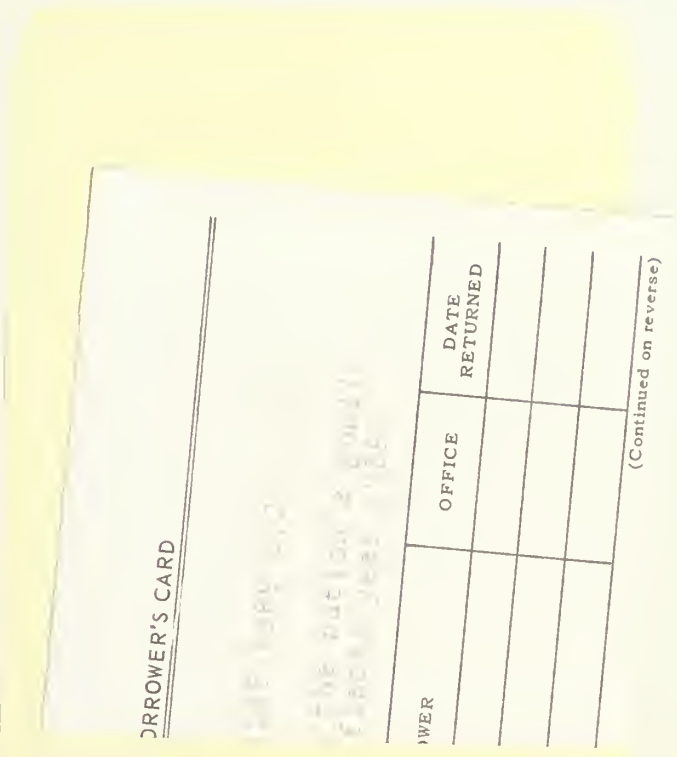

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